Thienes Engineering, Inc.
CIVIL ENGINEERING | LAND SURVEYING

PRELIMINARY HYDROLOGY CALCULATIONS

FOR

RUBIDOUX COMMERCE PARK

WEST OF AVALON STREET BETWEEN 25TH & 28TH STREET
JURUPA, CA

PREPARED FOR

PROFICIENCY RUBIDOUX LLC
5020 CAMPUS DRIVE
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SEPTEMBER 23, 2022
REVISED JUNE 26, 2023

JOB NO. 3384

PREPARED BY

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PRELIMINARY HYDROLOGY CALCULATIONS

FOR

RUBIDOUX COMMERCE PARK

PREPARED UNDER
THE SUPERVISION OF

REINHARD STENZEL , PE
R.C.E. 56155
EXP. 12/31/24

INTRODUCTION

A: PROJECT LOCATION

The project site is located on the northwesterly side of West Riverside Canal, between 28th Street and 25th Street in the City of Jurupa Valley, California. Please see next page for vicinity map.

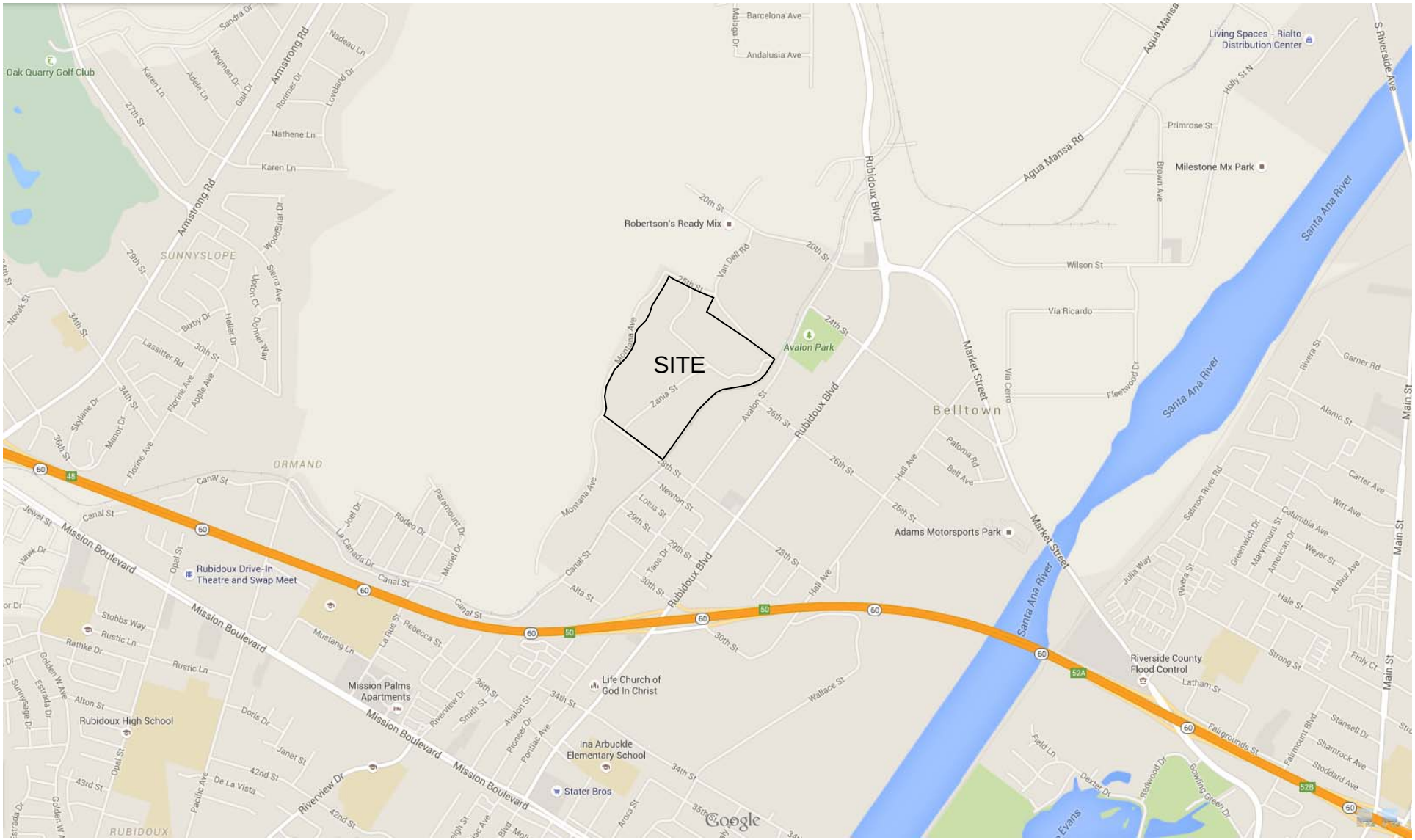
B: STUDY PURPOSE

The purpose of this study is to determine the proposed condition 100-year peak flow rate from the site that ultimately drains to the existing Belltown Line "D" storm drain in 28th Street. Also included is detention analysis for mitigation of increased runoff due to the commercial development.

C: PROJECT STAFF:

Thienes Engineering staff involved in this study include:

Reinhard Stenzel
Brian Weil


SITE
Oak Quarry Golf Club
Armstrong Rd
SUNNYSLOPE
ORMAND
RUBIDOUX
Robertson's Ready Mix
Avalon Park
Rubidoux Blvd
Belltown
Market Street
Adams Motorsports Park
Santa Ana River
Milestone Mx Park
Living Spaces - Rialto Distribution Center
Agua Mansa Rd
Mission Boulevard
Rubidoux Drive-In Theatre and Swap Meet
Mission Palms Apartments
Rubidoux High School
Life Church of God In Christ
Ina Arbuckle Elementary School
Stater Bros
Riverview Dr
Riverside County Flood Control
Google

DISCUSSION

The project site consists of 5 buildings over three distinct areas. Buildings 1-3 are located between 25th Street and 28th Street on the northwesterly side of the prolongation of 26th Street and the proposed extension of Van Dell Road. Building 4 is located on the southeasterly side of the extension of Van Dell Road and 26th Street. The West Riverside Canal is located on the southerly sides of Buildings 1, 2, and 4. Finally, Building 5 is located at the southwesterly corner of 26th Street and Avalon Street. Buildings 1-3 portion of the project site encompass approximately 58.5 acres, Building 4 encompasses approximately 15.9 acres and Building 5 encompasses approximately 2.5 acres. Each building has truck yards and vehicle parking lots.

Additional improvements include the construction of the public street that connects 26th Street and Van Dell Road. There will be two water quality/detention basins located along the southerly property line. Buildings 1 and 2 will drain to the basin located on the southerly side of these buildings, Basin "A". Buildings 3 and 4 will drain to the basin located on the southerly side of Building 4, Basin "B".

Under existing conditions, an existing hillside on the westerly side of the project site drains to the project site. Proposed conditions will intercept this runoff and convey the offsite flow through a separate storm drain that does not comingle with runoff from the project site. An additional public storm drain will be constructed to intercept runoff from offsite hillside areas tributary to Van Dell Road. This storm drain will continue southeasterly through the proposed public street. This storm drain along with all other drainage systems confluence at 28th Street, ultimately connecting to an existing Riverside County Flood Control and Water Conservation District (R.C.F.C.&W.C.D.) storm drain system in 28th Street.

Master Drainage Plan

Per "Rubidoux Area Master Drainage Plan" by R.C.F.C.&W.C.D the "Belltown Master Drainage Plan Alternative 2 – District System", runoff from the project site, offsite hillside area, and flow in the West Riverside Canal is tabled to the 72-inch Storm Drain Line "D" in 28th Street. The Storm Drain Line "D" system is designed for 100-year storm events. The existing storm drain plan indicated a downstream 100-year peak flow rate of 460 cfs.

Correspondence with R.C.F.C.&W.C.D. indicate that the Master Drainage Plan considered the project site and offsite areas as existing (pre-developed) conditions. Hydrology calculations were not available through the County. However, some limited drainage maps were provided, but did not indicate the overall drainage area tributary to the storm drain in 28th Street. Also, the County indicates that there is approximately 110 cfs in the West Riverside Canal at the upstream location adjacent to Building 4. It is not clear what the offsite tributary area is to the Canal.

See Appendix "A" for Master Drainage Plan, as-built storm drain plans, storm event confirmation email and other pertinent reference materials.

Existing Conditions

The majority of the project site is currently an undeveloped dirt lot. Runoff from this portion of the site, offsite hillside areas and adjacent horse stables generally surface drain southerly to the West Riverside Canal. This is an existing earthen channel adjacent to the southerly property line. This channel flows southwesterly to an existing headwall that conveys runoff to the existing 72" RCP in 28th Street (also part of Storm Drain Line "D"). The existing 72" RCP continues southwesterly in 28th Street.

It is assumed that the County's hydrology for Line "D" includes roughly the same drainage area. The County states that existing undeveloped conditions were used for the hydrology calculations, although only limited calculations and maps are available. The 72" RCP storm drain system downstream was designed for a 100-year peak flow rate of 460 cfs.

Rational Method calculations are provided for the project site individually of the offsite area. This will yield peak flow rates for comparison to the proposed condition. Excluding the offsite area is reasonable since proposed condition will collect all offsite runoff prior to entering the project site.

Runoff from the project site generally drains in a southeasterly direction to the Riverside Canal channel adjacent to the property line. Several individual drainage areas were modeled to simulate the existing sheet flow that discharges to the channel. Land use is considered Open Brush, Poor Cover with the exception of the dirt stock piles that are considered as Barren land use. The following table summarizes the existing condition 100-year peak flow rates for the larger portion of the project site:

Location (Nodes)	Area (Acres)	100-Year Peak Flow (cfs)
100-101	5.0	5.7
200-203	18.22	19.8
300-301	5.06	8.4
400-403	11.22	12.7
500-505	37.1	39.7

The southerly 2.50-acre site is currently developed with a church building, a paved parking lot, and an unpaved grass lot. This southerly site generally surface drains southerly to Avalon Street, then westerly to a catch basin at the 28th Street/Avalon Street intersection tributary to the same 72-inch storm drain. The existing condition 100-year peak flow rate at this location is approximately 9.3 cfs

See Appendix "B" for existing condition hydrology calculations.

Proposed Condition

Offsite:

The proposed condition will intercept the offsite hillside and adjacent properties to the west in various "V"-gutters and catch basins (nodes 10-84 on Proposed Condition Hydrology Map). A proposed storm drain system will convey offsite flows and runoff from the proposed sideslope southwesterly around proposed Buildings 1-3, ultimately to the extension of the County storm drain system in 28th Street. The 100-year peak flow rate at this location is approximately 200.7 cfs.

Runoff from offsite areas north and west of 25th Street (nodes 250-55) are collected in catch basins that are part of the Van Dell Road Improvements. A public storm drain will convey runoff southerly through the prolongation of Van Dell Road and 26th Street. Additional runoff from this portion of the proposed public street (nodes 256-57) are collected in this storm drain system. The public storm drain then continues westerly, south of Buildings 1 and 2. The 100-year peak flow rate at this location is approximately 55.6 cfs.

Upstream areas (not the project site) tributary to the West Riverside Canal are unknown. However, R.C.F.C.&W.C.D. indicates that there is 110 cfs entering the Canal via an existing 48" storm drain at the area adjacent to Building 4. This peak flow rate, and the area of the channel bound by the project site and the Railroad tracks is added at the end of the hydrologic model. Flow continues to be intercepted at the existing headwall and 60" C.M.P. in the channel at 28th Street.

Onsite:

Generally, runoff from the Building 3 portion of the project site (nodes 200-212) is collected in catch basins located in the truck yard and parking areas. A proposed private storm drain will convey these flows easterly through the Building 4 site. Runoff from Building 4 (nodes 220-35) is also tributary to the storm drain system. The storm drain continues southerly, discharging into the detention basin located on the southeasterly side of the Building 4. The total 100-year peak flow rate from the Buildings 3 and 4 sites at detention Basin "B" (at node 235) is approximately 53.1 cfs. Runoff from Basin "B" is conveyed westerly to the previously mentioned storm drain system (at node 258).

Runoff from Buildings 1 and 2 (nodes 300-353) are generally collected in catch basins located in the truck yards and vehicle parking lots. Proposed storm drain systems convey flows south-easterly to the detention basin, Basin "A", located on the south-easterly side of the Buildings. Runoff discharged from the detention basin is conveyed to the previously mentioned public storm drain system that traverses through 28th Street. The 100-year peak flow rate tributary to Basin "A" is approximately 85.3 cfs.

The two public storm drains confluence at 28th street near the existing railroad tracks (at node 355). Here, the total offsite and onsite 100-year peak flow rate is approximately 380.7 cfs. Continuing southeasterly in 28th Street, runoff from the West Riverside Canal is added

to the hydrologic model, yielding a total 100-year peak flow rate at the constructed portion of existing Line "D" of 490.7 cfs (undetained Rational Method peak flow rate).

As expected, the 100-year peak flow rate at the point of connection is higher than the 460 cfs shown on the existing County storm drain plan. This is due to changing to commercial usage for the project site. Also, without the County hydrology study, total tributary areas cannot be compared. Onsite detention will be utilized to mitigate the increase runoff due to the development of the project site (see below).

The southerly Building 5 site (nodes 400-412) will maintain its existing drainage pattern. The site generally drains to a grate inlet at the southwesterly corner of the site. Here, flow will discharge through a parkway culvert to Avalon Street. Areas adjacent to the street also discharge to Avalon Street. The proposed condition 100-year peak flow rate for this building is approximately 8.1 cfs. Same as existing condition, proposed condition Building 5 site runoff will be conveyed southwesterly in Avalon Street to the catch basin at the 28th Street/Avalon Street intersection, ultimately to the 72-inch storm drain in 28th Street.

See Appendix "B" for proposed condition hydrology calculations and Appendix "D" for proposed condition hydrology map.

Detention Analysis

For final design, Riverside County typically requires detention analysis for the 1-hour, 3-hour, 6-hour and 24-hour duration events for the 2-year, 5-year and 10-year return frequencies. Detention basin and outlet sizing will ensure that none of these storm events has a higher peak discharge in the post-development condition than in the pre-development condition.

Hydrographs for the above described events were established for both existing (pre-developed) and proposed (commercial) development conditions. Hydrograph parameters are as follows:

- For the 2-year and 5-year events, the loss rate will be determined using an AMC I condition. For the 10-year event, AMC II was used.
- Undeveloped condition Low Loss=90%
- Basin site Low Loss=10%
- Rainfall values from the Riverside County Hydrology Manual

Memo from R.C.F.C.&W.C.D. states "For preliminary design purposes, sizing may be based on the difference in runoff hydrograph volume between the "developed" condition and the "pre-developed" condition for the 24-hour duration event for the 10-year return frequency. Final design of the basin, including a complete hydrology study, will not be required until the improvement plan stage of this development."

Hydrographs were established for each basin using the tributary areas for each basin (site only, no offsite area) for the existing and proposed condition for the 24-hour event for the 10-year storm frequency. The following table summarizes pre- and post-development peak flow rates for the 10-year 24-hour event:

Location	Existing Condition	Proposed Condition	Difference
Basin "A"	2.9 cfs	14.4 cfs	+11.5 cfs
Basin "B"	1.2 cfs	8.3 cfs	+7.1 cfs

The following table summarizes the volumes for the 10-year 24-hour storm event:

Location	Existing Condition	Proposed Condition	Difference
Basin "A"	1.16 ac-ft	8.70 ac-ft	+7.54 ac-ft
Basin "B"	0.69 ac-ft	5.07 ac-ft	+4.38 ac-ft

The two proposed detention basins have the required volumes based on preliminary sizing. However, Riverside County Flood Control requested that 100-year storm events be routed through the detention basins to ensure that the overall peak flow rate discharge from the onsite and offsite areas does not exceed the downstream peak flow rate in existing storm drain plans (460 cfs).

Hydrographs and routing were computed for the 1-hour, 3-hour, 6-hour and 24-hour 100-year storm events. The following page summarizing peak flow rates, volumes, depths and other parameters for both detention basins.

From the summary tables on the follow page, the maximum 100-year peak flow rate from Basin"A" is 18.5 cfs and 15.9 cfs from Basin "B".

Final design may require additional flood routing through the basins for other various storm events may change the size of the basins. For Building 5, there is negligible increase in impervious area and therefore peak flow mitigation will not be required.

R.C.F.C.&W.C.D. previously acknowledged that since there will be a negligible increase in impervious surfaces for the sit of Building 5, no increased runoff mitigation is required and is deemed acceptable.

See Appendix "C" for pre- and post-condition hydrographs.

Methodology

Hydrology calculations were computed using the Riverside County Rational Method program (by AES software). Hydrographs were calculated using Civild Unit Hydrograph software. The soil types are "A", "C" and "D" for the project site per U.S.D.A. Natural Resource Conservation Services "Custom Soils Resource Report of Western Riverside

Jurupa Valley Commerce Park
Hydrologic Summary

Basin Summary - 100-year Design Storm

Basin A

(4) 3" Holes with Invert at 881.75

(1) 24" Riser with Top at 882.75

	Peak Inflow (cfs)	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Volume (ac-ft)	Peak Discharge (cfs)
24-hour	26.94	4.02	884.02	5.58	18.45
6-hour	55.80	4.02	884.02	5.57	18.43
3-hour	63.88	3.58	883.58	4.84	14.29
1-hour	99.33	2.75	882.75	3.47	0.95

Basin B

(4) 3" Holes with Invert at 881.25

(1) 24" Riser with Top at 882.25

	Peak Inflow (cfs)	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Volume (ac-ft)	Peak Discharge (cfs)
24-hour	15.88	3.20	882.95	2.78	13.42
6-hour	31.82	3.46	883.21	3.05	15.87
3-hour	36.74	3.15	882.90	2.74	12.64
1-hour	59.92	2.44	882.19	2.05	0.92

Area". See Appendix "A" for reference materials. The offsite hillside is soil type "D" per the same study.

Summary

The project site and offsite hillside areas are tabled to an existing R.C.F.C.&W.C.D. storm drain in 28th Street. The peak flow rate shown on the storm drain plan is 460 cfs. With onsite detention, the overall 100-year peak flow rate tributary to the County storm drain is approximately 400.7 cfs as summarized below:

200.7 cfs from offsite hillside @ Node 84
55.6 cfs from areas to public street @ Node 257
110.0 cfs from existing channel @ Node 356
18.5 cfs from Basin "A"
15.9 cfs from Basin "B"

This study shows that the proposed improvements to the project site do not have any adverse effects on existing downstream storm drain systems.

APPENDIX	DESCRIPTION
A	REFERENCE MATERIALS
B	HYDROLOGY CALCULATIONS
C	DETENTION CALCULATIONS
D	HYDROLOGY MAPS

APPENDIX A

REFERENCE MATERIALS

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Western Riverside Area, California

July 2, 2015

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

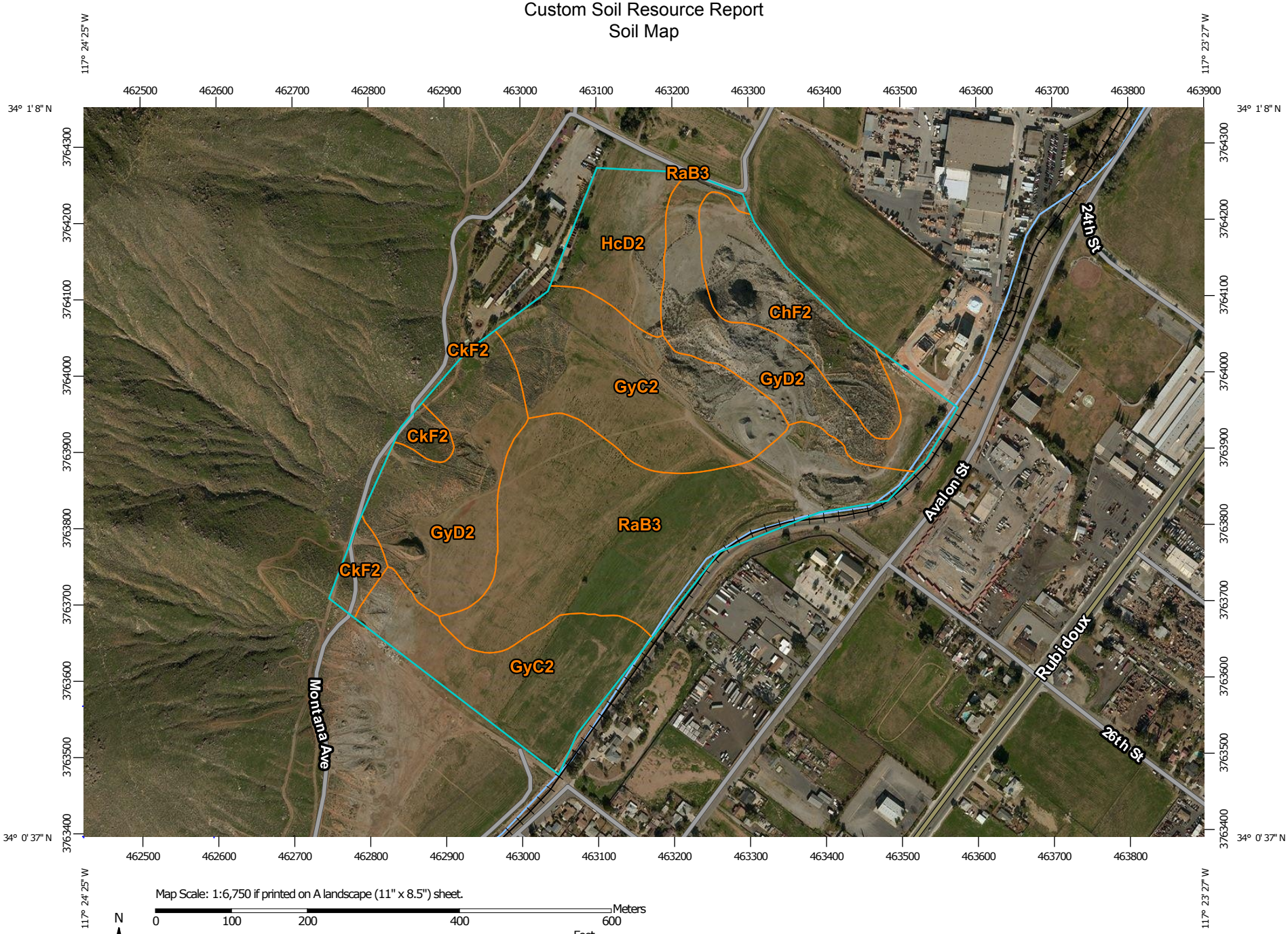
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:6,750 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 300 600 1200 1800

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Riverside Area, California
Survey Area Data: Version 7, Sep 17, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 5, 2015—Jan 18, 2015

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Western Riverside Area, California (CA679)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
ChF2	Cieneba sandy loam, 15 to 50 percent slopes, eroded	7.3	9.0%
CkF2	Cieneba rocky sandy loam, 15 to 50 percent slopes, erod ed	2.2	2.7%
GyC2	Greenfield sandy loam, 2 to 8 percent slopes, eroded	22.9	28.3%
GyD2	Greenfield sandy loam, 8 to 15 percent slopes, eroded	20.3	25.1%
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed	5.7	7.1%
RaB3	Ramona sandy loam, 0 to 5 percent slopes, severely erod ed	22.5	27.8%
Totals for Area of Interest		**80.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been

observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Western Riverside Area, California

ChF2—Cieneba sandy loam, 15 to 50 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcsc
Elevation: 500 to 4,000 feet
Mean annual precipitation: 12 to 35 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Cieneba and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cieneba

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from igneous rock

Typical profile

H1 - 0 to 14 inches: sandy loam
H2 - 14 to 22 inches: weathered bedrock

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW LOAMY (1975) (R019XD060CA)

Minor Components

Friant

Percent of map unit: 5 percent

Fallbrook

Percent of map unit: 5 percent

Vista

Percent of map unit: 5 percent

CkF2—Cieneba rocky sandy loam, 15 to 50 percent slopes, erod ed

Map Unit Setting

National map unit symbol: hcsf
Elevation: 500 to 4,000 feet
Mean annual precipitation: 12 to 35 inches
Mean annual air temperature: 57 to 64 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Not prime farmland

Map Unit Composition

Cieneba and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cieneba

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from igneous rock

Typical profile

H1 - 0 to 14 inches: sandy loam
H2 - 14 to 22 inches: weathered bedrock

Properties and qualities

Slope: 15 to 50 percent
Depth to restrictive feature: 14 to 22 inches to paralithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: SHALLOW LOAMY (1975) (R019XD060CA)

Minor Components

Rock outcrop
Percent of map unit: 10 percent

Vista
Percent of map unit: 3 percent

Fallbrook
Percent of map unit: 3 percent

Escondido
Percent of map unit: 3 percent

Friant
Percent of map unit: 3 percent

Unnamed
Percent of map unit: 3 percent

GyC2—Greenfield sandy loam, 2 to 8 percent slopes, eroded

Map Unit Setting
National map unit symbol: hcvw
Elevation: 100 to 3,500 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition
Greenfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Greenfield

Setting
Landform: Terraces, alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile
H1 - 0 to 26 inches: sandy loam
H2 - 26 to 43 inches: fine sandy loam
H3 - 43 to 60 inches: loam
H4 - 60 to 72 inches: stratified loamy sand to sandy loam

Properties and qualities
Slope: 2 to 8 percent

Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: LOAMY (1975) (R019XD029CA)

Minor Components

Hanford

Percent of map unit: 3 percent

Pachappa

Percent of map unit: 3 percent

Arlington

Percent of map unit: 3 percent

Ramona

Percent of map unit: 3 percent

Unnamed

Percent of map unit: 3 percent

GyD2—Greenfield sandy loam, 8 to 15 percent slopes, eroded

Map Unit Setting

National map unit symbol: hcvx
Elevation: 100 to 3,500 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 200 to 300 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Greenfield and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Greenfield

Setting

Landform: Alluvial fans, terraces
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 26 inches: sandy loam
H2 - 26 to 43 inches: fine sandy loam
H3 - 43 to 60 inches: loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: LOAMY (1975) (R019XD029CA)

Minor Components

Hanford

Percent of map unit: 5 percent

Arlington

Percent of map unit: 5 percent

Pachappa

Percent of map unit: 5 percent

HcD2—Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed

Map Unit Setting

National map unit symbol: hcw3
Elevation: 150 to 900 feet
Mean annual precipitation: 9 to 20 inches
Mean annual air temperature: 63 to 64 degrees F
Frost-free period: 250 to 280 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hanford and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hanford

Setting

Landform: Alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 8 inches: coarse sandy loam
H2 - 8 to 40 inches: fine sandy loam
H3 - 40 to 60 inches: stratified loamy sand to coarse sandy loam

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: SANDY (R020XD012CA)

Minor Components

Tujunga

Percent of map unit: 5 percent

Greenfield

Percent of map unit: 5 percent

Ramona

Percent of map unit: 5 percent

RaB3—Ramona sandy loam, 0 to 5 percent slopes, severely erod ed

Map Unit Setting

National map unit symbol: hcy6
Elevation: 250 to 3,500 feet
Mean annual precipitation: 10 to 20 inches
Mean annual air temperature: 63 degrees F
Frost-free period: 230 to 320 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Ramona and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ramona

Setting

Landform: Terraces, alluvial fans
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 8 inches: sandy loam
H2 - 8 to 17 inches: fine sandy loam
H3 - 17 to 68 inches: sandy clay loam
H4 - 68 to 74 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Available water storage in profile: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: LOAMY (1975) (R019XD029CA)

Minor Components

Hanford
Percent of map unit: 5 percent

Tujunga
Percent of map unit: 5 percent

Greenfield
Percent of map unit: 5 percent

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

PROJECT SITE
SAN BERNARDINO
RIVERSIDE
CORONA
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
R7W
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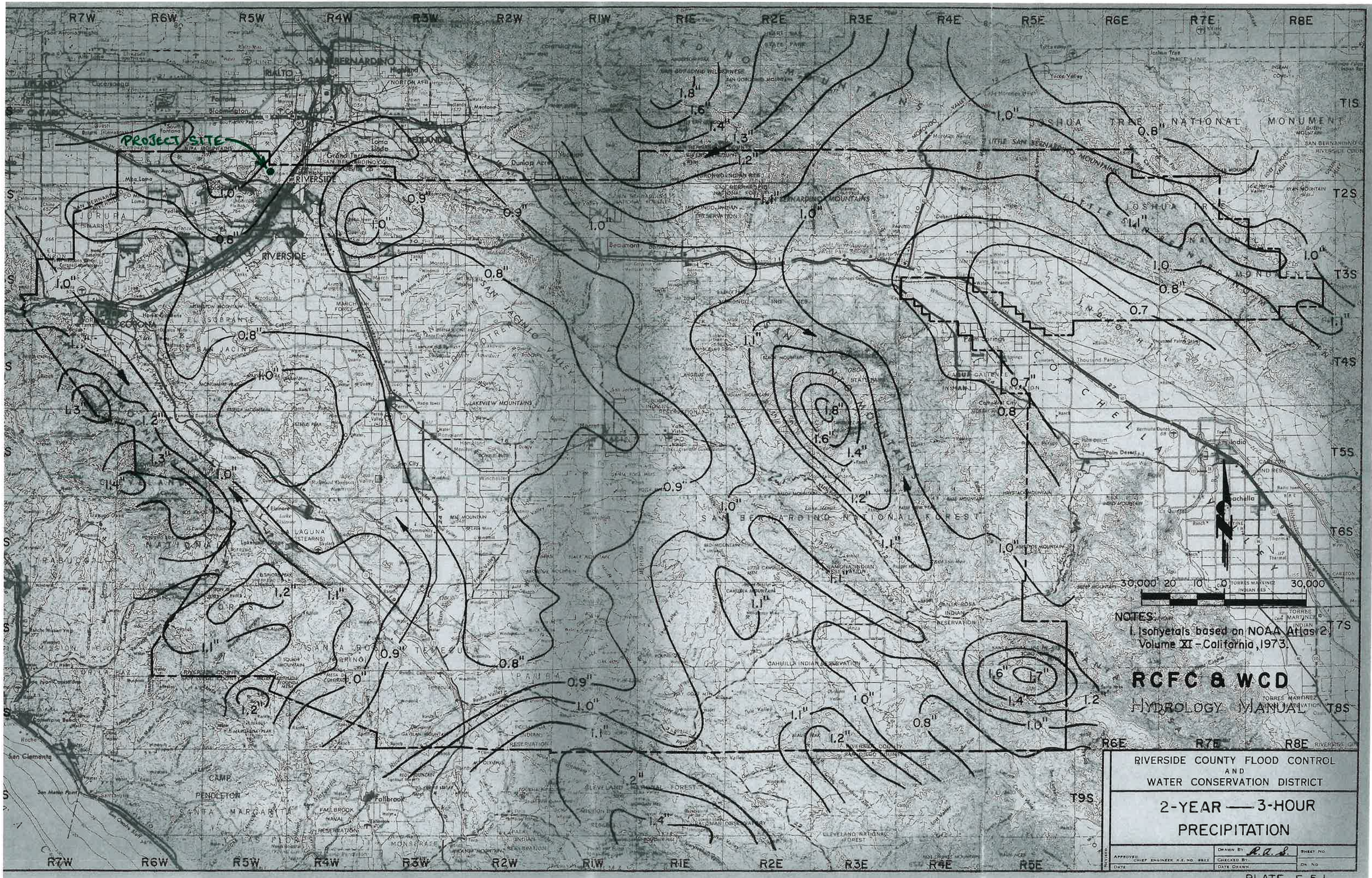
NOTES
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 1-HOUR
PRECIPITATION
DRAWN BY R.A.S.
CHECKED BY
DATE DRAWN
SHEET NO
DR. NO.
APPROVED CHIEF ENGINEER
DATE
REVISED

PLATE D-4,3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SAN JACINTO MOUNTAINS
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
SAN JACINTO VALLEY
SAN GORGONIO WILDERNESS
SAN JACINTO WILDERNESS
SAN GABRIEL MOUNTAINS
LAKEVIEW MOUNTAINS
SAN JACINTO PEAK
SAN GORGONIO MOUNTAIN
SAN JACINTO MOUNTAIN
SAN GABRIEL PEAK
SAN BERNARDINO
RIALTO
RIVERSIDE
CORONA
TEMECULA
FALLBROOK
PALM SPRINGS
INDIO
COACHELLA
MARCH AIR FORCE BASE
NORTON AFB
CAMP PENDLETON
MARINE CORPS BASE
SAN CLEMENTE
MORONGO INDIAN RESERVATION
AGUA CALIENTE INDIAN RESERVATION
CAHUILLA INDIAN RESERVATION
SANTA ROSA INDIAN RESERVATION
TORRES MARTINEZ INDIAN RESERVATION
SAN MANUEL INDIAN RESERVATION
PECHANGA INDIAN RESERVATION
PALA INDIAN RESERVATION
LA LAGUNA (STEARNS)
SANTA MARGARITA
TRABUCO
MISSION VIEJO
LA PALMA
LOMA LINDA
GRAND TERRACE
COLTON
REDLANDS
HIGHGROVE
MENTONE
BLOOMINGTON
SOUTH FONTANA
CRESTMORE
JURUPA
MIRA LOMA
NORCO
EL SOBRANTE
SAN JACINTO
HEMET
WINCHESTER
ELSINORE
LAKE ELSINORE
LAKE MATHEWS
LAKE PERRIS
LAKE HEMET
LAKE SKINNER
LAKE CAHUILLA
LAKE MORENO
LAKE MEAD
LAKE MATTHEWS
LAKE ELSINORE

NOTES:
1. Isohyetals from NOAA Atlas 2 - Volume XI - California, 1973

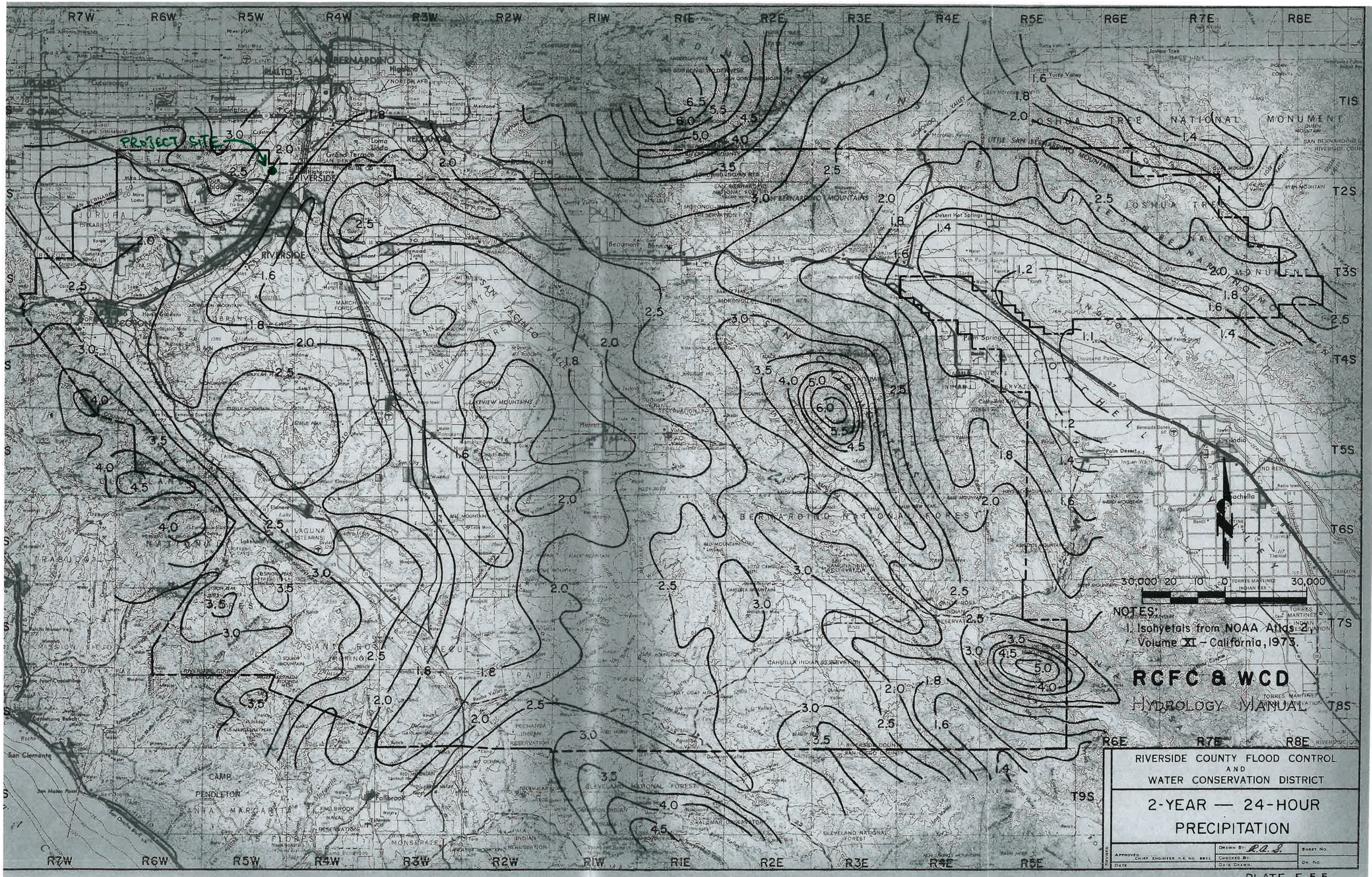
RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

2-YEAR — 6-HOUR PRECIPITATION

APPROVED CHIEF ENGINEER R.E. NO. 8882	DRAWN BY:	SHEET NO.
DATE	CHECKED BY:	OF NO.
REVISED	DATE DRAWN	

PLATE E-5.3


PROJECT SITE
SAN BERNARDINO
RIVERSIDE
RIALTO
RELLANDO
Grand Terrace
Loma Linda
Highgrove
Beaumont
Banning
Palm Springs
Desert Hot Springs
Thousand Palms
Palm Desert
Indio
Coachella
Hemet
Elsinore
Fallbrook
San Clemente
CAMP PENDLETON
SANTA MARGARITA
LAS FLORES
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO MOUNTAINS
LAKEVIEW MOUNTAINS
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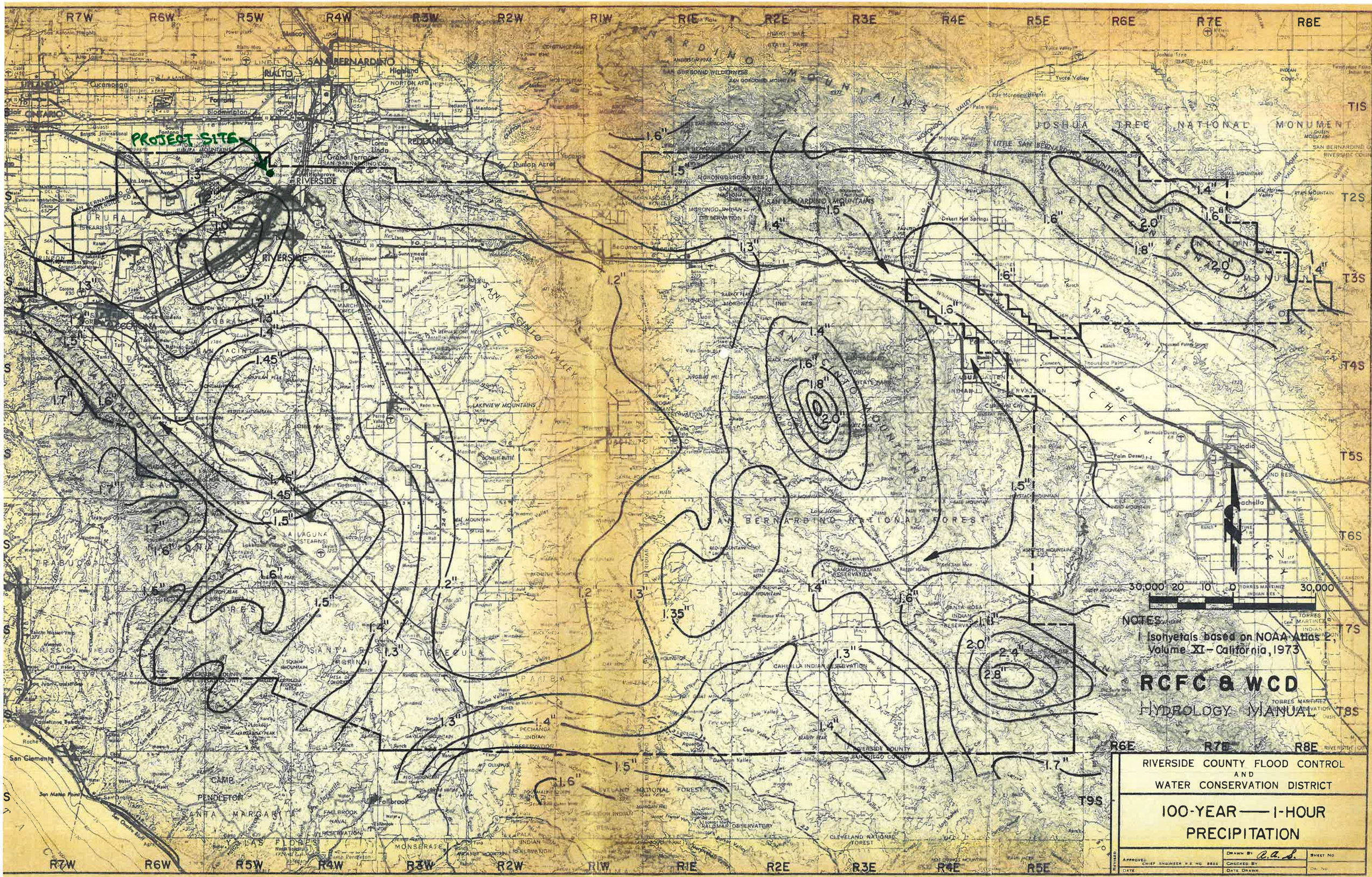
NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR
PRECIPITATION
DRAWN BY R.A.S.
CHECKED BY
DATE DRAWN
SHEET NO
DR. NO
APPROVED
CHIEF ENGINEER R.E. NO. 8821
DATE

PLATE E-5,5


PROJECT SITE
SAN BERNARDINO MOUNTAINS
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SAN JACINTO VALLEY
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LAKEVIEW MOUNTAINS
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SAN BERNARDINO
RIALTO
RIVERSIDE
Beaumont
Banning
Yucca Valley
Palm Springs
Desert Hot Springs
Cathedral City
Thousand Palms
Indio
Coachella
Fontana
Ontario
Upland
Rancho Cucamonga
Loma Linda
Redlands
Highland
Grand Terrace
Colton
Norton AFB
Moreno Valley
March AFB
Perris
Lake Elsinore
Temecula
Murrieta
Fallbrook
Camp Pendleton
San Clemente
San Mateo Point
Aguanga
Warner Springs
Julian
Idyllwild
Hemet
San Jacinto
Banning
Morongo Indian Reservation
Cahuilla Indian Reservation
Santa Rosa Indian Reservation
Agua Caliente Indian Reservation
Pechanga Indian Reservation
Pala Indian Reservation
Rincon Indian Reservation
Laguna Mountain
Volcan Mountain
Palomar Mountain
Santa Rosa Plateau
Vail Lake
Lake Skinner
Diamond Valley Lake
Lake Perris
Lake Hemet
Lake Henshaw
Lake Cahuilla
Salton Sea
Salton Sea Wildlife Refuge
Torres Martinez Indian Reservation
Salton Sea Naval Air Observatory
Salton Sea State Park
Anza-Borrego Desert State Park
Mecca
Coachella Valley
Whitewater River
Santa Ana River
Mission Creek
Morongo Valley
Yucca Valley
Twentynine Palms
Joshua Tree
Indian Cove
Bermuda Dunes
Palm Desert
Indian Wells
La Quinta
Rancho Mirage
Palm Springs
Cathedral City
Desert Hot Springs
Morongo Valley
Yucca Valley
Twentynine Palms
Joshua Tree
Indian Cove
Bermuda Dunes
Palm Desert
Indian Wells
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Rancho Mirage
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NOTES
1 Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
100-YEAR — 1-HOUR PRECIPITATION
APPROVED CHIEF ENGINEER R.E. NO. 8855
DATE
DRAWN BY A.A.L.
CHECKED BY
DATE DRAWN
SHEET NO
DR. NO
REVISED

PLATE D-4.4

PROJECT SITE
SAN BERNARDINO
RIVERSIDE
REDLANDS
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO MOUNTAINS
SAN BERNARDINO NATIONAL FOREST
LAKEVIEW MOUNTAINS
Palm Springs
Indio
Coachella
CAMP PENDLETON
Fallbrook
30,000 20 10 0 30,000
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
100-YEAR — 3-HOUR PRECIPITATION

PLATE E-5.2

NOTES:
1. Isohyetals from NOAA Atlas 2, Volume XI - California, 1973

RCFC & WCD

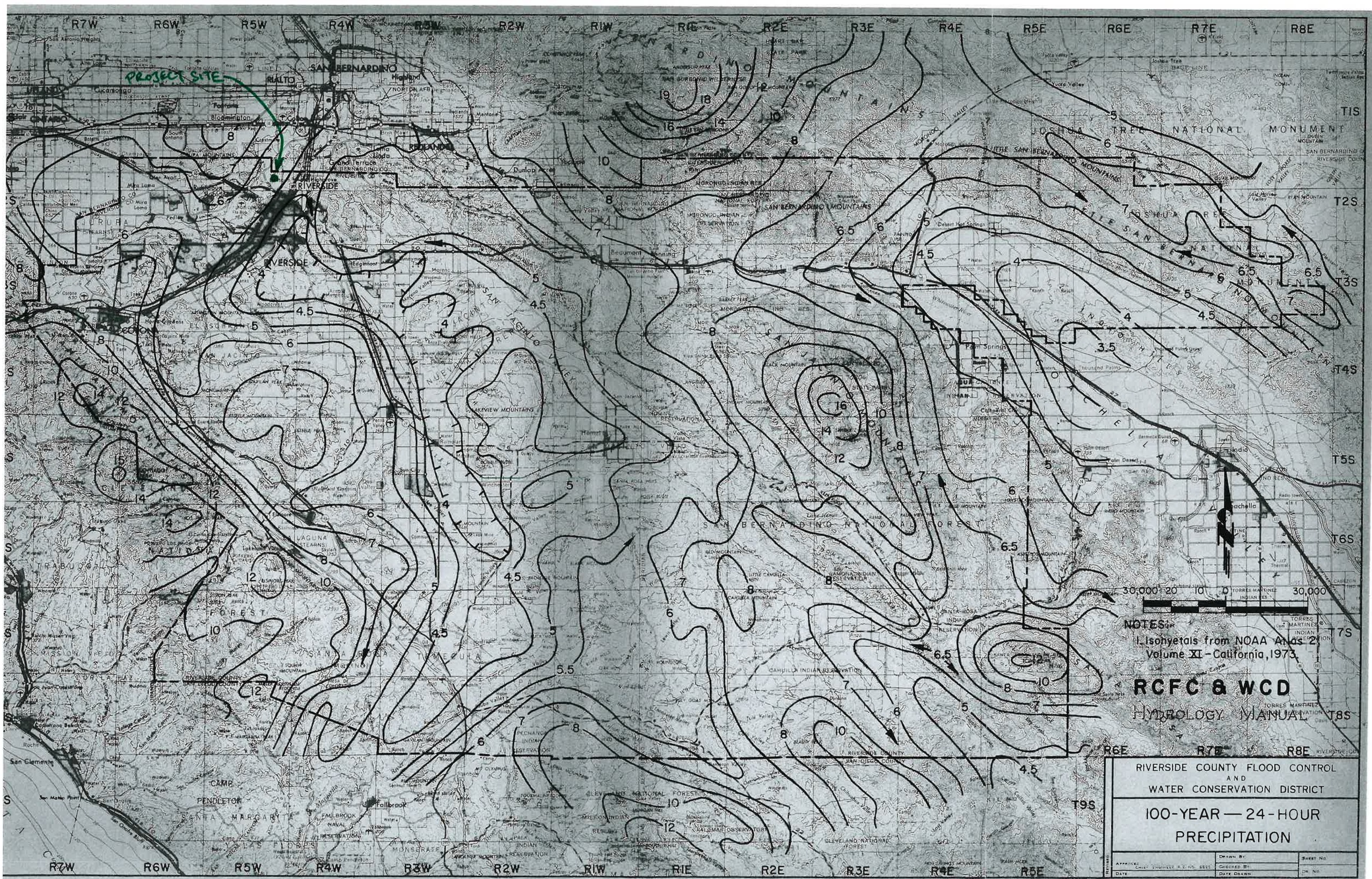
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 6-HOUR PRECIPITATION

APPROVED: CHIEF ENGINEER, R.C.E. NO. 4882	DRAWN BY: R.A.S.	SHEET NO.
DATE	CHECKED BY:	DR. NO.
REVISED	DATE DRAWN:	

PLATE E-5.4


PROJECT SITE
SAN BERNARDINO
RIVERSIDE
RIALTO
Highland
Redlands
Grand Terrace
Colton
Loma Linda
Mira Loma
Jurupa
Pedley
Norco
Corona
Eastvale
Glen Avon
Bloomington
Fontana
Rancho Cucamonga
Upland
Ontario
Mentone
Yucaipa
Dunlap Acres
Beaumont
Banning
Edgemont
Moreno Valley
Sunnymead
Woodcrest
Home Gardens
Mead Valley
Lake Mathews
Lake Perris
Perris
Nuevo
Lakeview
Hemet
Valle Vista
San Jacinto
Winchester
Homeland
Romoland
Menifee
Sun City
Quail Valley
Wildomar
Murrieta
Temecula
Pechanga Indian Reservation
Morongo Indian Reservation
San Manuel Indian Reservation
Soboba Indian Reservation
Cahuilla Indian Reservation
Santa Rosa Indian Reservation
Agua Caliente Indian Reservation
Morongo Valley
Yucca Valley
Joshua Tree
Twentynine Palms
Desert Hot Springs
Palm Springs
Cathedral City
Rancho Mirage
Palm Desert
Indian Wells
La Quinta
Indio
Coachella
Thermal
Mecca
Bermuda Dunes
Indian Wells
Morongo Valley
Lost Horse Valley
Ryan Mountain
Box Canyon
Dillon Road
Whitewater
Windy Point
Cabazon
Banning
Beaumont
Calimesa
Yucaipa
Redlands
Loma Linda
Grand Terrace
Colton
Rialto
San Bernardino
Highland
Norton AFB
Crafton
Redlands
Mentone
Oak Glen
Forest Falls
Big Bear Lake
Lake Arrowhead
Crestline
Running Springs
Arrowbear Lake
Twin Peaks
Wrightwood
Mount Baldy
Cucamonga Peak
Ontario
Upland
Claremont
Pomona
Chino
Chino Hills
Corona
Norco
Eastvale
Jurupa
Mira Loma
Glen Avon
Pedley
Riverside
Arlington Mountains
Box Spring Mountains
Reche Canyon
Badlands
Lake Perris
Perris
Nuevo
Lakeview Mountains

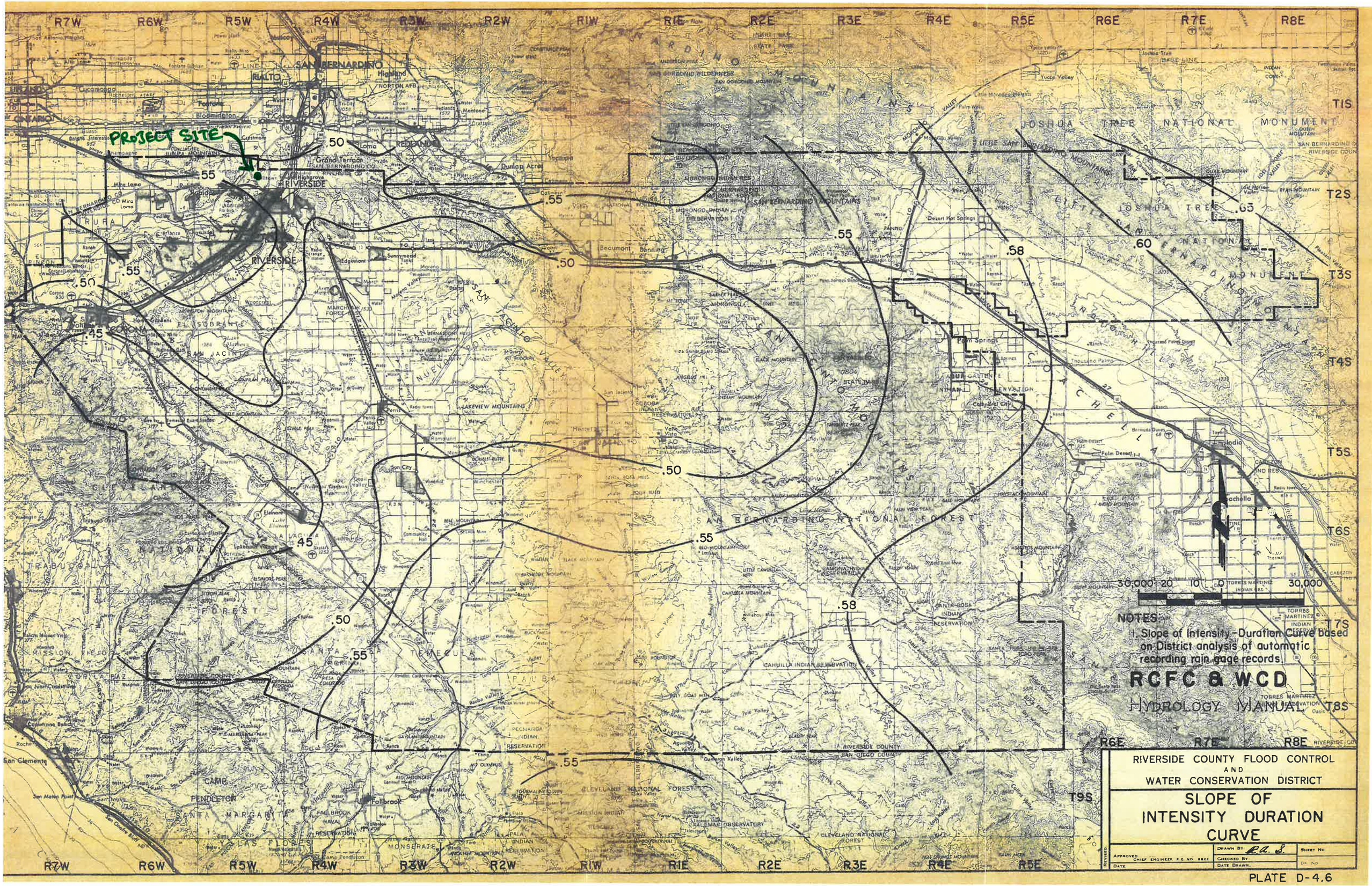
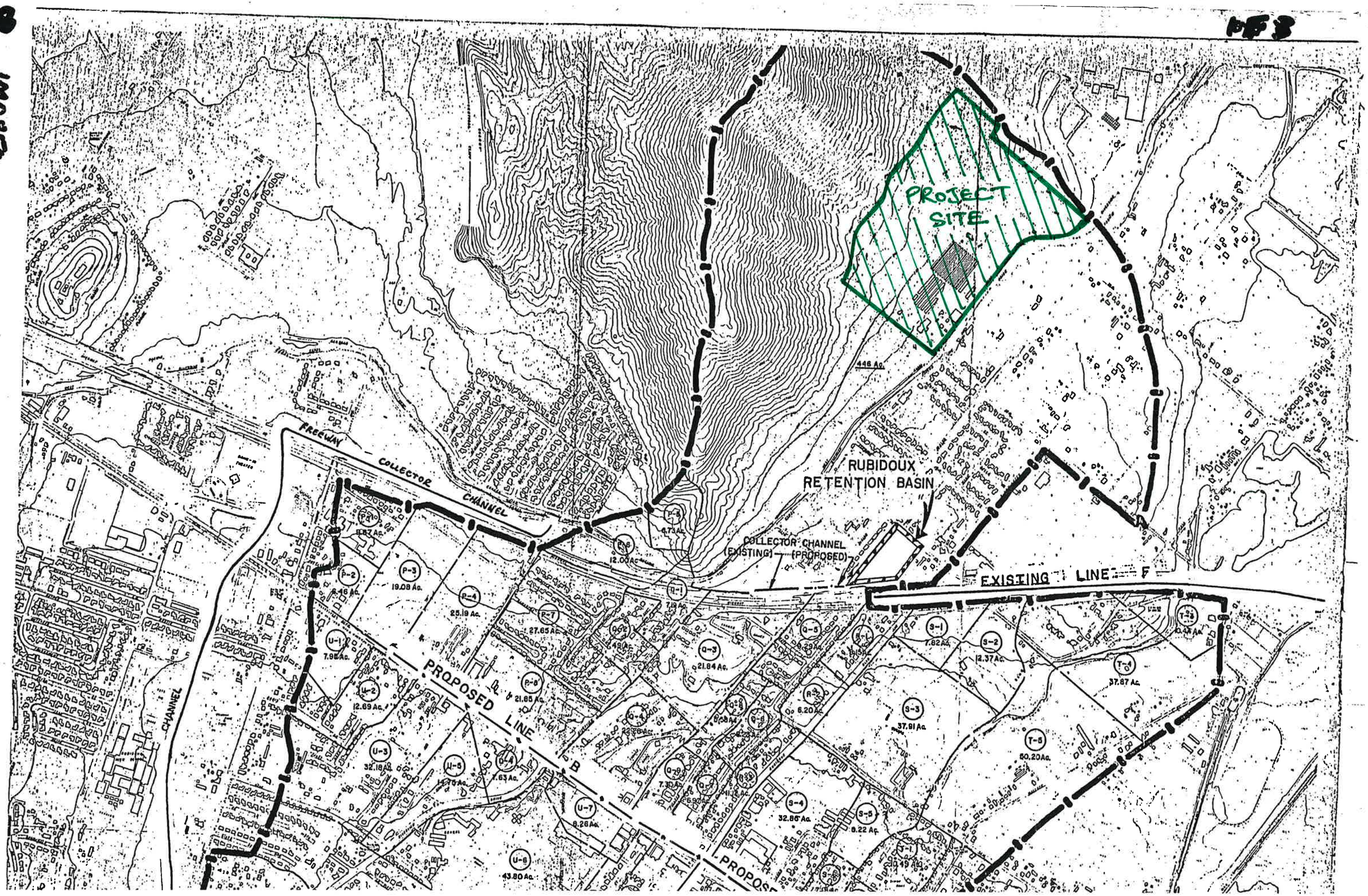
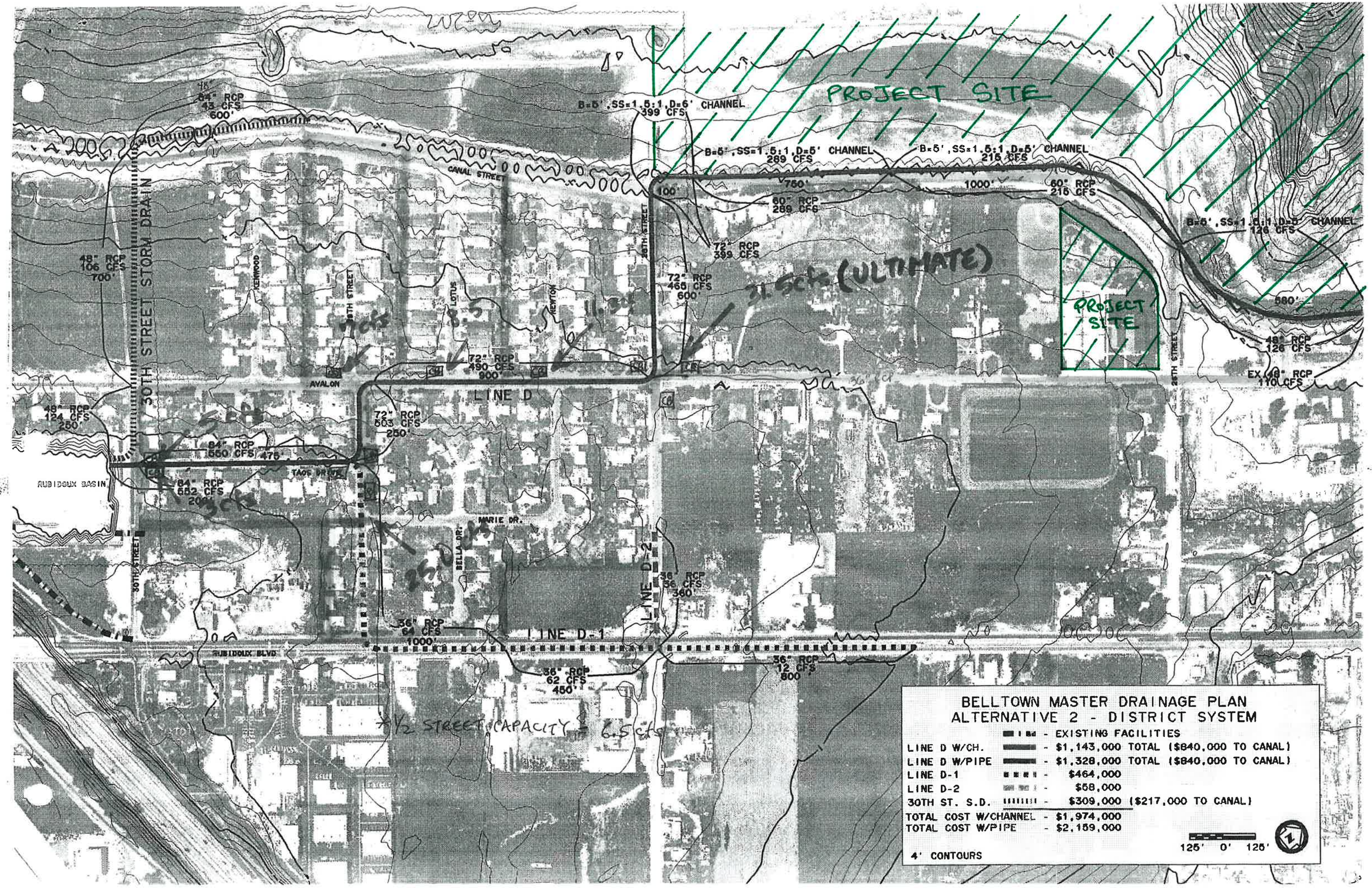

PROJECT SITE
R7W
R6W
R5W
R4W
R3W
R2W
R1W
R1E
R2E
R3E
R4E
R5E
R6E
R7E
R8E
T1S
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
SAN BERNARDINO
RIVERSIDE
RIALTO
REDLANDS
CORONA
JOSHUA TREE NATIONAL MONUMENT
SAN BERNARDINO NATIONAL FOREST
CLEVELAND NATIONAL FOREST
CAMP PENDLETON
Fallbrook
Palm Springs
Indio
Coachella
.45
.50
.55
.58
.60
.65
30,000 20 10 0 30,000
NOTES
1. Slope of Intensity-Duration Curve based on District analysis of automatic recording rain gage records.
RCFC & WCD
HYDROLOGY MANUAL
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
SLOPE OF INTENSITY DURATION CURVE
APPROVED CHIEF ENGINEER P.E. NO. 8822
DATE
DRAWN BY R.A.S.
CHECKED BY
DATE DRAWN
SHEET NO
DR. NO

PLATE D-4.6


PROJECT SITE
RUBIDOUX RETENTION BASIN
COLLECTOR CHANNEL (EXISTING) (PROPOSED)
EXISTING LINE F
FREEWAY COLLECTOR CHANNEL
PROPOSED LINE B
CHANNEL
446 Ac.
P-1 9.87 Ac.
P-2 6.46 Ac.
P-3 19.08 Ac.
P-4 25.19 Ac.
P-5 6.73 Ac.
P-6 12.00 Ac.
P-7 27.65 Ac.
P-8 21.85 Ac.
Q-1 7.19 Ac.
Q-2 4.49 Ac.
Q-3 21.84 Ac.
Q-4 22.26 Ac.
Q-5 9.29 Ac.
Q-6 9.38 Ac.
Q-7 11.12 Ac.
Q-8 6.90 Ac.
Q-9 7.30 Ac.
R-1 8.15 Ac.
R-2 6.20 Ac.
S-1 7.82 Ac.
S-2 12.37 Ac.
S-3 37.91 Ac.
S-4 32.86 Ac.
S-5 8.22 Ac.
T-1 10.49 Ac.
T-2 10.44 Ac.
T-3 37.87 Ac.
T-5 50.20 Ac.
U-1 7.95 Ac.
U-2 12.69 Ac.
U-3 32.18 Ac.
U-4 7.63 Ac.
U-5 14.75 Ac.
U-6 43.80 Ac.
U-7 8.26 Ac.


PROJECT SITE
B=5', SS=1.5:1, D=6' CHANNEL
399 CFS
B=5', SS=1.5:1, D=5' CHANNEL
289 CFS
B=5', SS=1.5:1, D=5' CHANNEL
215 CFS
B=5', SS=1.5:1, D=5' CHANNEL
126 CFS
CANAL STREET
30TH STREET STORM DRAIN
48" RCP
43 CFS
600'
48" RCP
106 CFS
700'
48" RCP
124 CFS
250'
48" RCP
126 CFS
EX 48" RCP
110 CFS
750'
1000'
100'
60" RCP
289 CFS
60" RCP
215 CFS
72" RCP
399 CFS
72" RCP
465 CFS
600'
72" RCP
490 CFS
900'
72" RCP
503 CFS
250'
84" RCP
550 CFS
475'
84" RCP
552 CFS
200'
36" RCP
36 CFS
360'
36" RCP
64 CFS
1000'
36" RCP
62 CFS
450'
36" RCP
12 CFS
800'
580'
KENWOOD
30TH STREET
LOTUS
NEWTON
AVALON
TAOS DRIVE
RUBIDOUX BASIN
MARIE DR.
BELLA DR.
RUBIDOUX BLVD
LINE D
LINE D-1
LINE D-2
26TH STREET
31.5cfs (ULTIMATE)
7cfs
8.5
11.34
5cfs
3cfs
25.0cfs
*1/2 STREET CAPACITY = 6.5cfs
BELLTOWN MASTER DRAINAGE PLAN
ALTERNATIVE 2 - DISTRICT SYSTEM
- EXISTING FACILITIES
LINE D W/CH. - $1,143,000 TOTAL ($840,000 TO CANAL)
LINE D W/PIPE - $1,328,000 TOTAL ($840,000 TO CANAL)
LINE D-1 - $464,000
LINE D-2 - $58,000
30TH ST. S.D. - $309,000 ($217,000 TO CANAL)
TOTAL COST W/CHANNEL - $1,974,000
TOTAL COST W/PIPE - $2,159,000
125' 0' 125'
4' CONTOURS

BBB1	4.46	2
BBB2	11.42	15.88
BBB3	13.20	29.08
BBB4	2.39	31.47

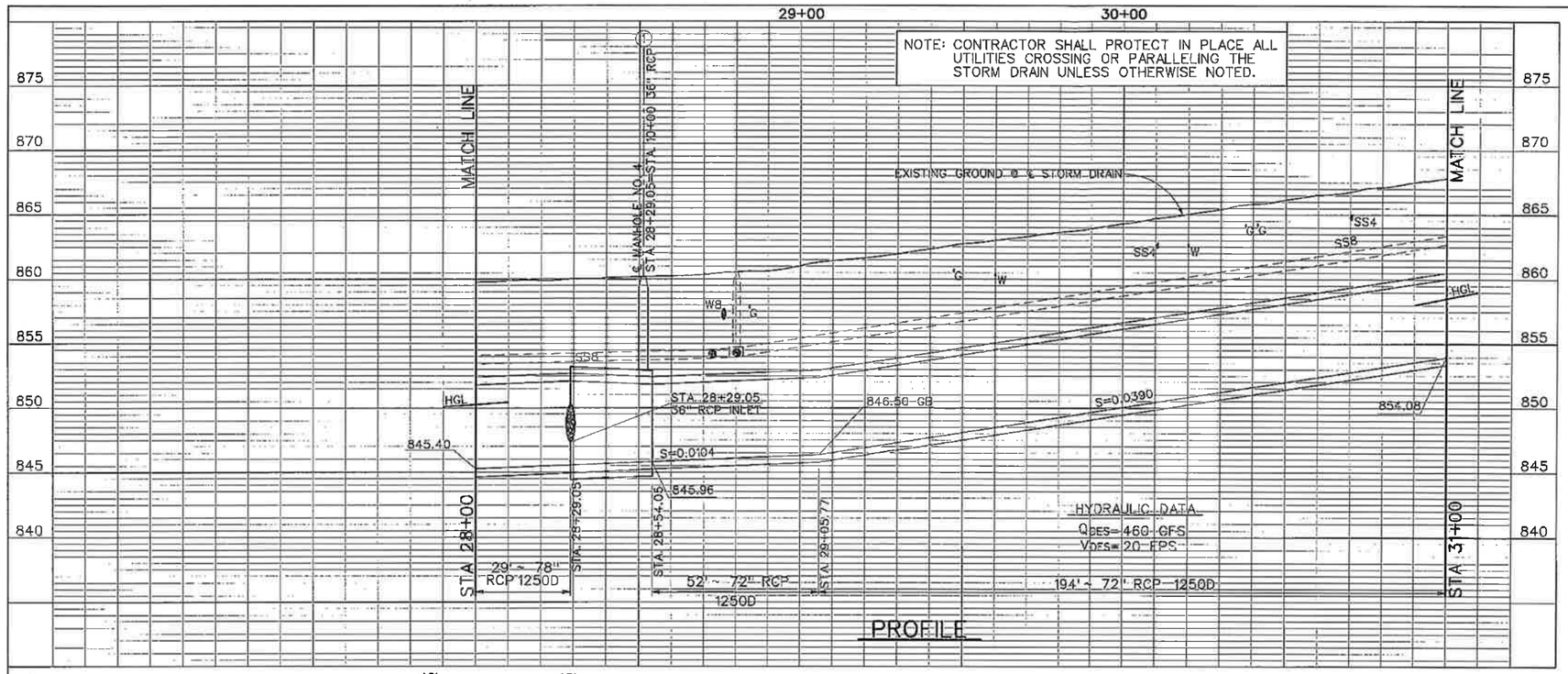
BELLTOWN MASTER DRAINAGE PLAN
ALTERNATIVE 2 - DISTRICT SYSTEM

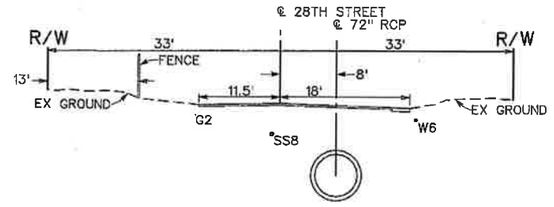
- EXISTING FACILITIES
- LINE D W/CH. - $1,143,000 TOTAL ($840,000 TO CANAL)
- LINE D W/PIPE - $1,328,000 TOTAL ($840,000 TO CANAL)
- LINE D-1 - $464,000
- LINE D-2 - $58,000
- 30TH ST. S.D. - $309,000 ($217,000 TO CANAL)

TOTAL COST W/CHANNEL - $1,974,000
TOTAL COST W/PIPE - $2,159,000

125' 0' 125'

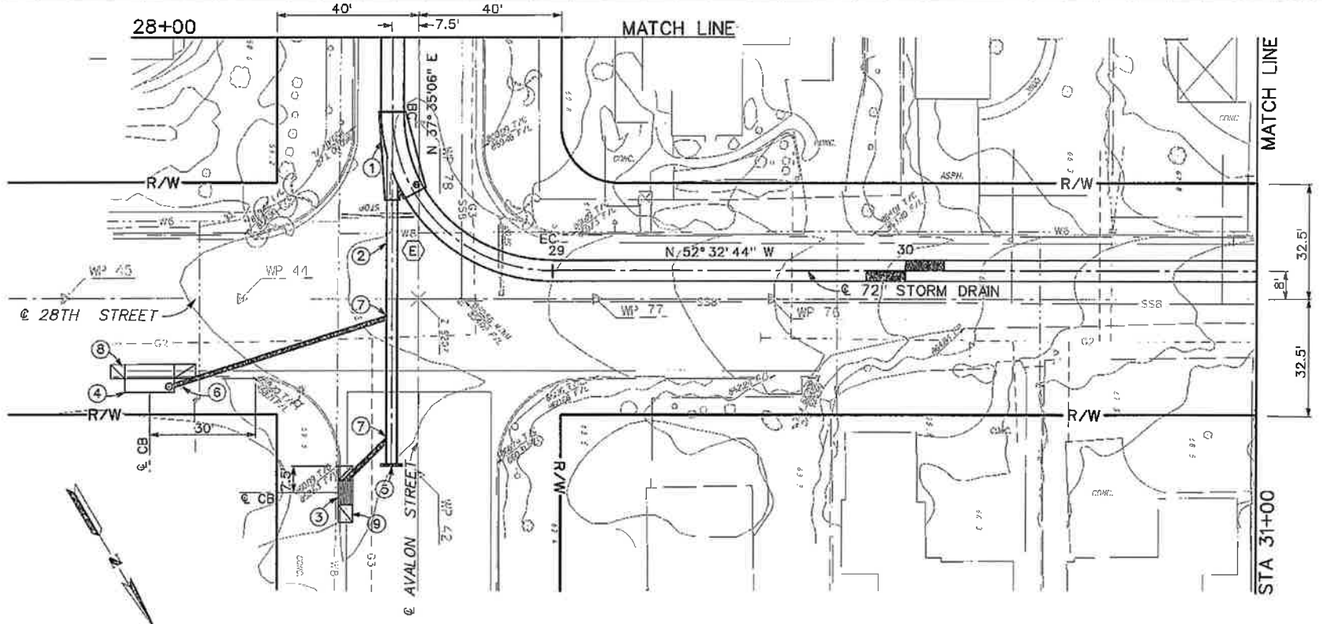
4' CONTOURS





SECTION STA. 30+00

10' 0 10'



PLAN

20' 0 20'

℄ CURVE DATA

Δ = 90° 07' 50"
R = 45.00'
L = 70.79'
T = 45.10'
BC = STA 28+29.05
EC = STA 28+99.84
N = 2313125.3990
E = 6213565.4340

NOTES

1. CONSTRUCT MH NO 4 PER STD MH 254. L=25', D_1 =78", D_2 =72", B=36", C=24.85', EL. R= 847.57, EL. S= 847.54.
2. INSTALL 36" RCP PER DETAILS ON SHEET 12.
3. CONSTRUCT CB NO 4 PER STD CB 101 W=6', V=4'. INSTALL 16 LF 18" RCP CLASS IV SEE PROFILE SHEET 12.
4. CONSTRUCT CB NO 1 PER STD CB 100 W=14', V=4. INSTALL 63 LF 18" RCP CLASS IV SEE PROFILE SHEET 12.
5. INSTALL CONCRETE BULKHEAD PER STD M 816.
6. REMOVE AND REINSTALL SIGN.
7. CONSTRUCT JS NO 2 PER STD JS 227. SEE PROFILE SHEET 12.
8. CONSTRUCT LD NO 2 PER STD LD 201.
9. CONSTRUCT LD NO 3 PER STD LD 202.

REGISTERED PROFESSIONAL ENGINEER CLYDE B. JOHNSON No. 30539 Exp. 3-31-04 CIVIL STATE OF CALIFORNIA

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG

TEMPORARY BENCH MARK

B.M. NO. Z – 9207

FD. 1¼" IP W/LS 4453 TAG IN CROSS INTERSECTIKON OF AVALON STREET AND 28TH STREET, FLUSH.

EL. 860.256

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: J. C. GALE
DRAWN BY: H. VERDUSCO
DATE DRAWN: FEB. 2001
CHECKED BY: JCG

RECOMMENDED FOR APPROVAL BY: DESIGN ENGINEER R.E. No. 30539 DATE: 3/15/01

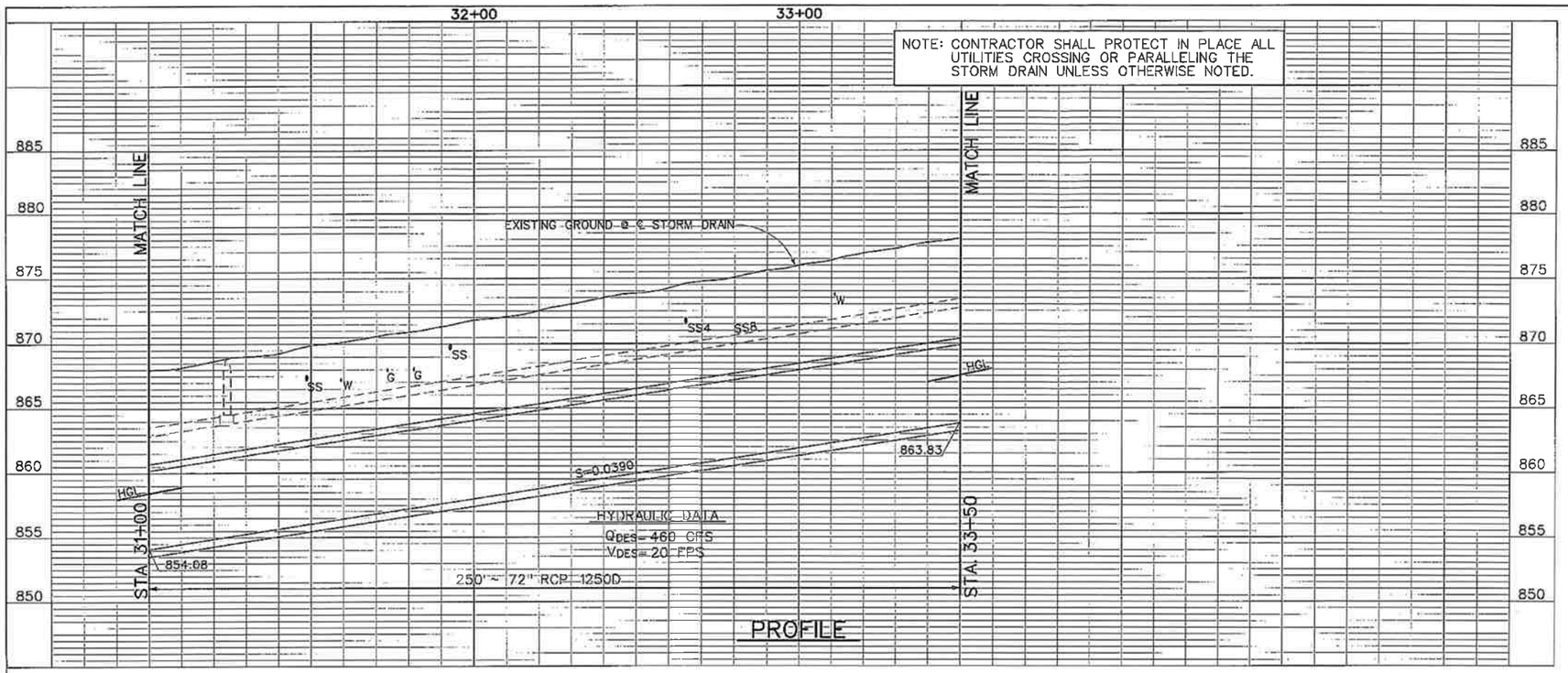
APPROVED BY: CHIEF ENGINEER R.E. NO. 22035 DATE: 3/15/01

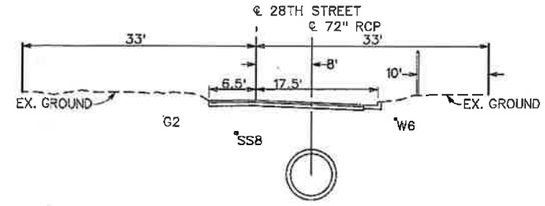
BELLTOWN LINE D

STAGE 1

PLAN AND PROFILE
STA. 28+00 TO STA. 31+00

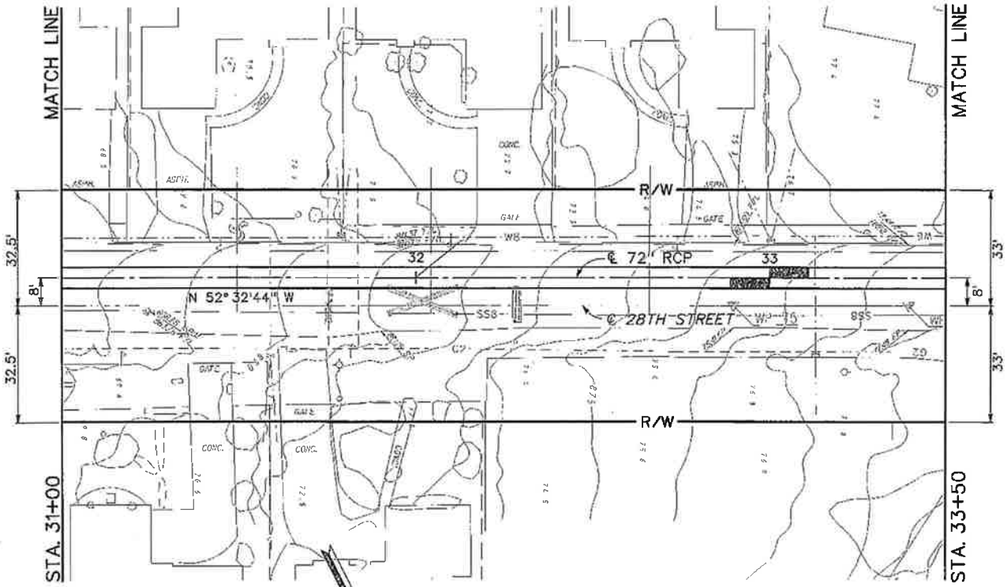
PROJECT NO. 1-0-0155
DRAWING NO. 1-590
SHEET NO. 7 OF 57





SECTION STA. 33+00

10' 0 10'



PLAN

20' 0 20'

REGISTERED PROFESSIONAL ENGINEER
CLYDE D. JOHNSON
No. 30539
Exp. 3-31-04
CIVIL
STATE OF CALIFORNIA

Don't Dig...Until You Call U.S.A. Toll Free
1-800-227-2600
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

TEMPORARY BENCH MARK
B.M. NO. Z - 9207

SEE SHEET 7

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: J. C. GALE
DRAWN BY: H. VERDUSCO
DATE DRAWN: FEB. 2001
CHECKED BY: SE S

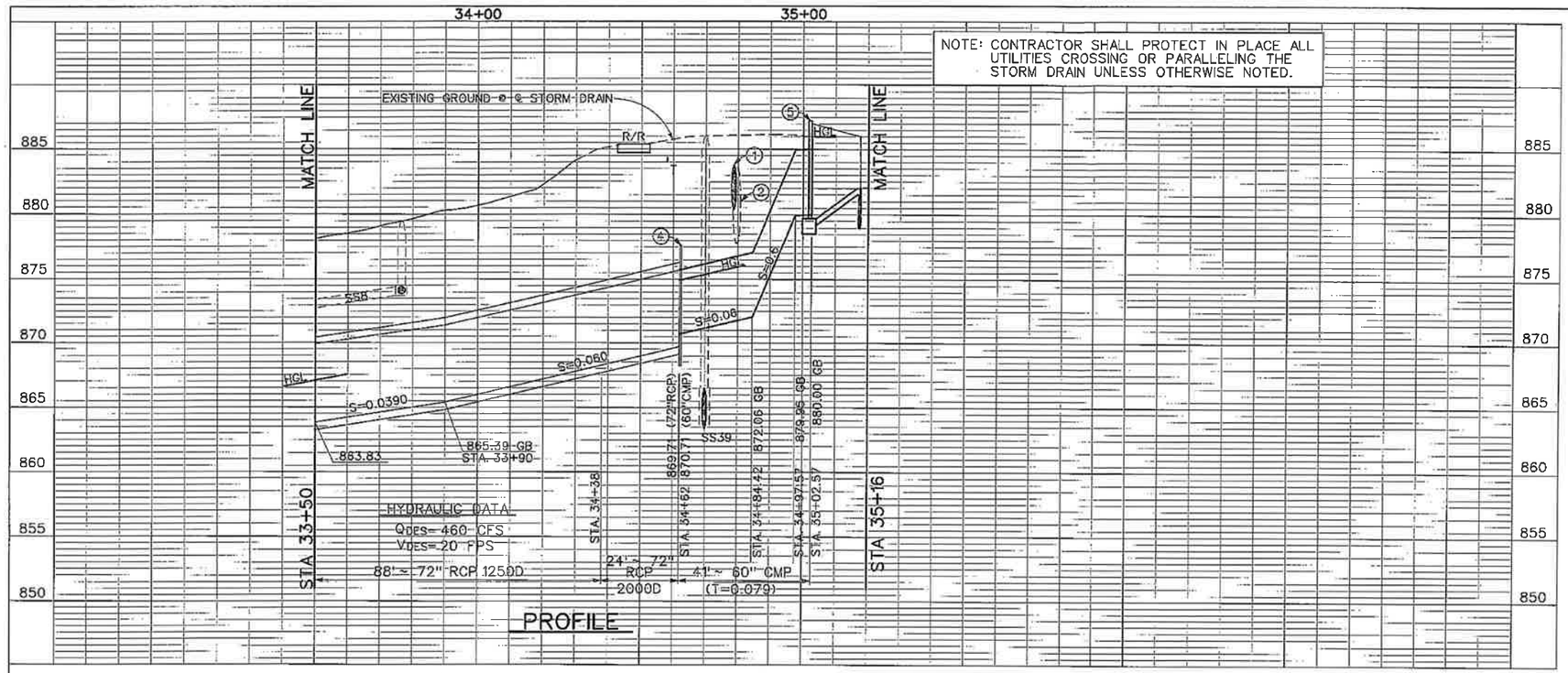
RECOMMENDED FOR APPROVAL BY: DESIGN ENGINEER R.E. No. 30539 DATE: 3/15/01

APPROVED BY: CHIEF ENGINEER R.E. NO. 22035 DATE: 3/15/01

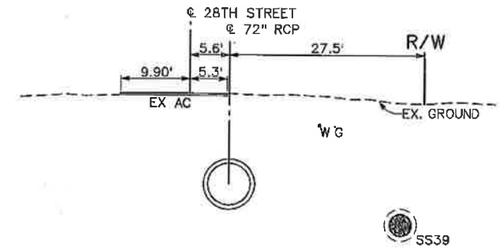
BELLTOWN LINE D

STAGE 1
PLAN AND PROFILE
STA. 31+00 TO STA. 33+50

PROJECT NO. 1-0-0155
DRAWING NO. 1-590
SHEET NO. 8 OF 57

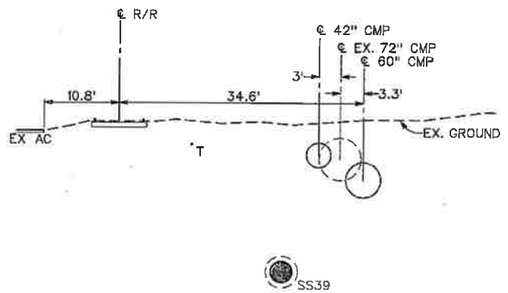


NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



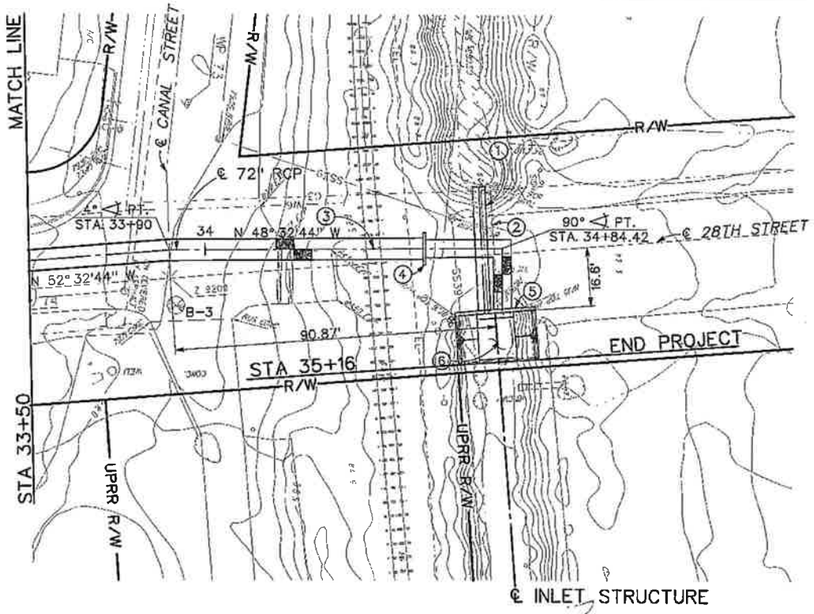
SECTION STA. 34+25

10' 0 10'



SECTION STA. 34+90

10' 0 10'



PLAN

20' 0 20'

NOTES

1. INSTALL 36' – 42" CMP (T= 0.079"). SEE SHEET 15 FOR DETAILS.
2. REMOVE AND DISPOSE OF EX 72" CMP.
3. CONTRACTOR MUST COORDINATE TRACK REMOVAL AND REPLACEMENT WITH UPPR. SEE SPECIFICATIONS.
4. CONSTRUCT CONCRETE BULKHEAD PER DETAIL ON SHEET 15.
5. CONSTRUCT CONCRETE HEADWALL PER DETAILS ON SHEET 14.
6. CONSTRUCT INLET STRUCTURE PER DETAILS SHOWN ON SHEET 15.
7. SLURRY BACKFILL 60" CMP BETWEEN STA. 34+62 AND STA. 34+79 TO 1' ABOVE TOP OF PIPE SLURRY BACKFILL 60" CMP BETWEEN STA. 34+79 AND STA. 35+02 TO 1' BELOW EXISTING GRADE.

REGISTERED PROFESSIONAL ENGINEER
CLYDE D. JOHNSON
No. 30539
Exp. 3-31-04
STATE OF CALIFORNIA
CIVIL

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

TEMPORARY BENCH MARK
B.M. NO. Z – 9209
FD. 1" I.P. W/RCE 9908 TAG IN "T" INTERSECTION OF CANAL STREET AND 28TH STREET.
EL. 879.95

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: M. WONG
DRAWN BY: H. VERDUSCO
DATE DRAWN: FEB. 2001
CHECKED BY: SEL

RECOMMENDED FOR APPROVAL BY: Clyde Johnson DESIGN ENGINEER R.E. No. 30539 DATE: 3/15/01

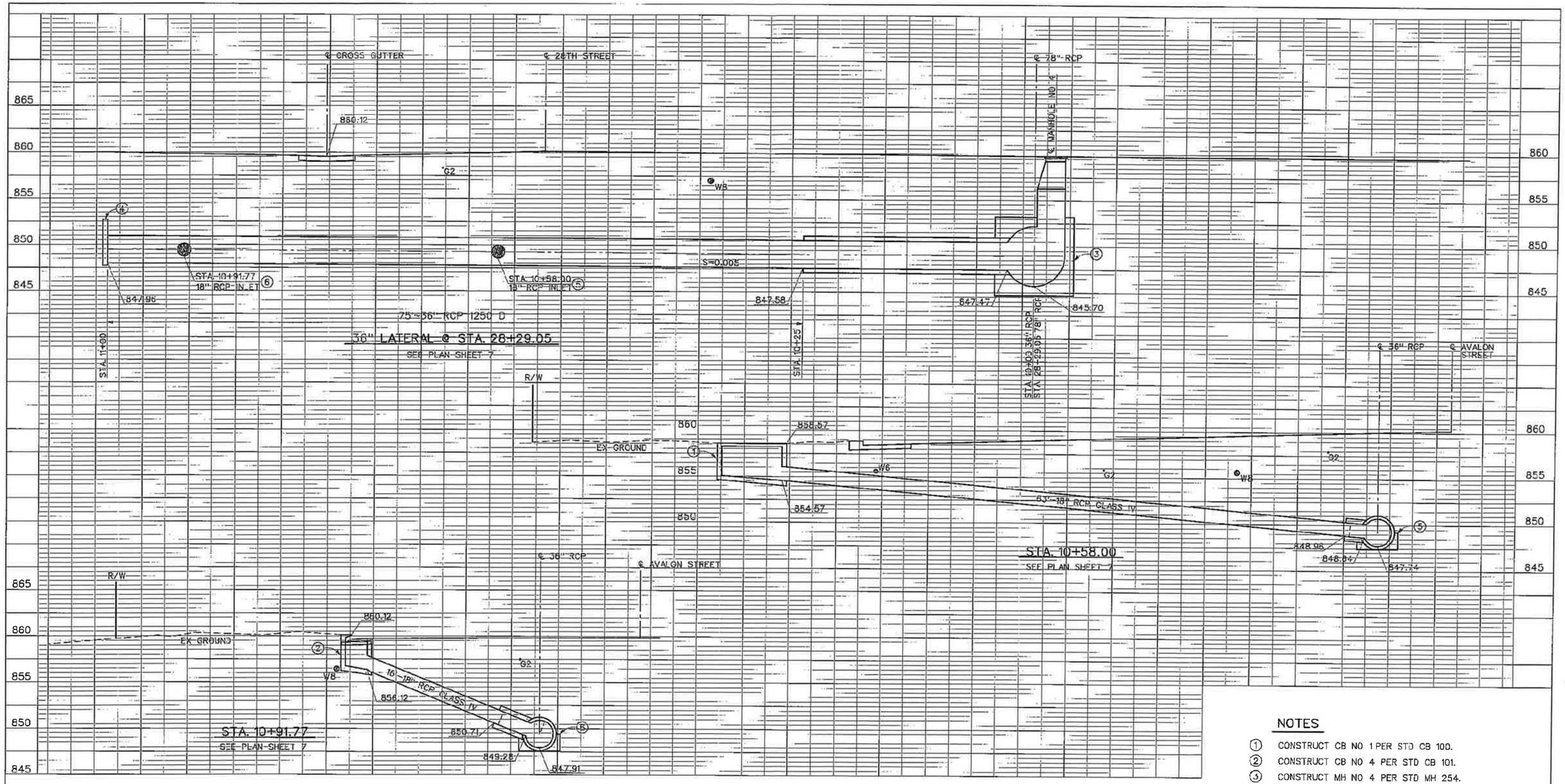
APPROVED BY: CHIEF ENGINEER R.E. No. 22035 DATE: 3/15/01

BELLTOWN LINE D

STAGE 1

STA. 33+50 TO STA. 35+16
PLAN AND PROFILE

PROJECT NO. 1-0-0155
DRAWING NO. 1-590
SHEET NO. 9 OF 57



CONNECTOR PIPE PROFILES

5' 0 5'

NOTES

1. CONSTRUCT CB NO 1 PER STD CB 100.
2. CONSTRUCT CB NO 4 PER STD CB 101.
3. CONSTRUCT MH NO 4 PER STD MH 254.
4. INSTALL CONCRETE BULKHEAD PER STD M 816.
5. CONSTRUCT JS NO 2 PER STD JS227.
   A=72° 09'32"B=18', C=3.5', D=36", E=2", F=19",
   G=16.5" L=3, EL S=848.64, EL R=848.96.
6. CONSTRUCT JS NO 2 PER STD JS227.
   A=45°, B=18", C=5', D=36", E=3.5', F=15",
   G=18", L=3.7', EL S=849.28, EL R=850.71.

REGISTERED PROFESSIONAL ENGINEER
CLYDE D. JOHNSON
No. 30538
Exp. 3-31-02
CIVIL
STATE OF CALIFORNIA

Don't Dig...Until You Call U.S.A. Toll Free
1-800-227-2600
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: J. C. GALE
DRAWN BY: H. VERDUSCO
DATE DRAWN: FEB. 2001
CHECKED BY: SES

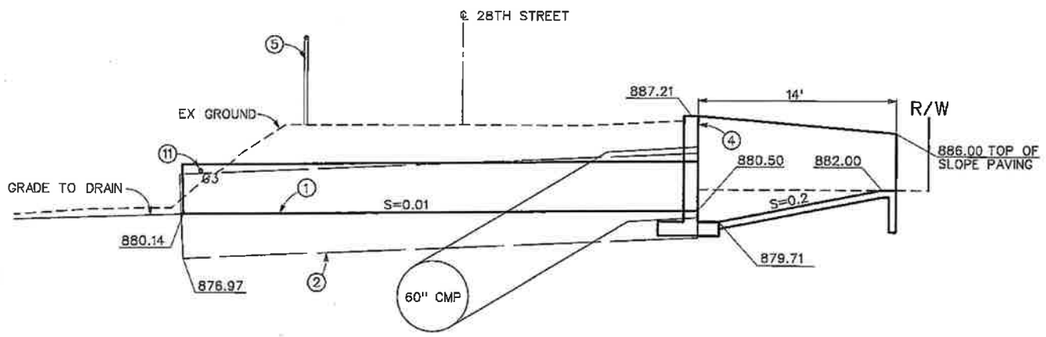
RECOMMENDED FOR APPROVAL BY:
DESIGN ENGINEER R.E. No. 30538
DATE: 3/15/01

APPROVED BY:
CHIEF ENGINEER R.E. NO. 22035
DATE: 3/15/01

BELLTOWN LINE D
STAGE 1
CONNECTOR PIPE PROFILES

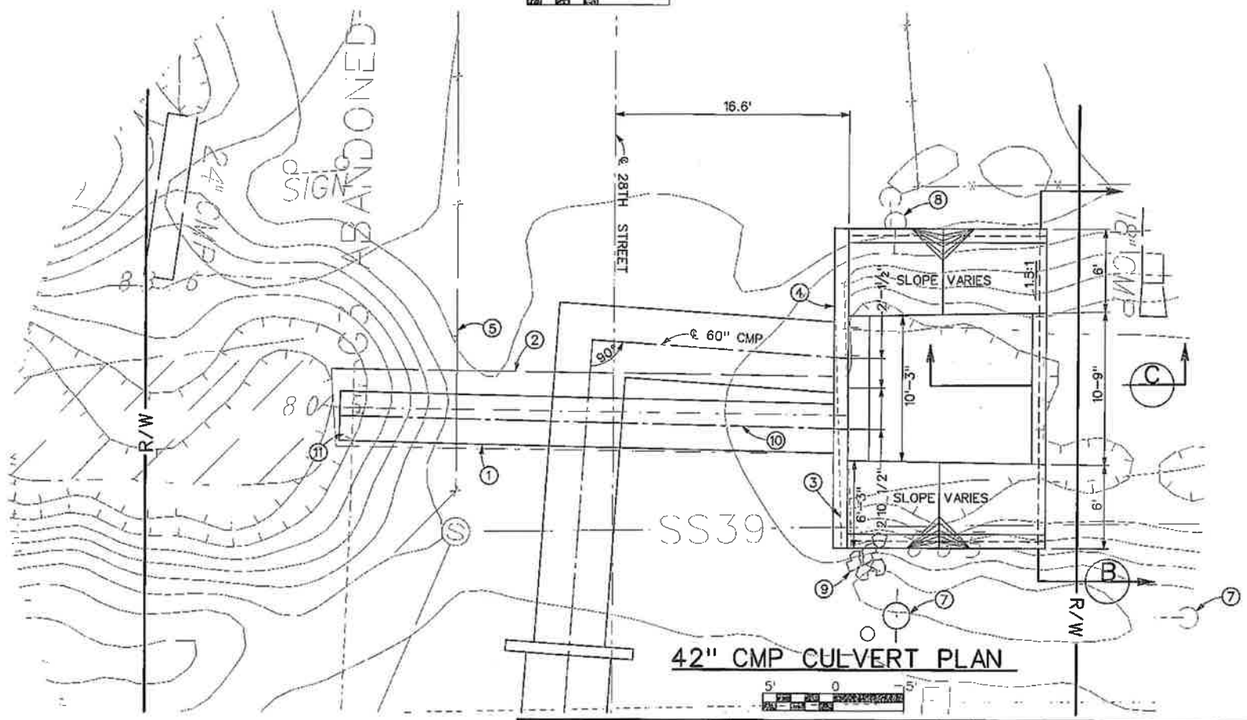
PROJECT NO. 1-0-0155
DRAWING NO. 1-590
SHEET NO. 12 OF 57

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



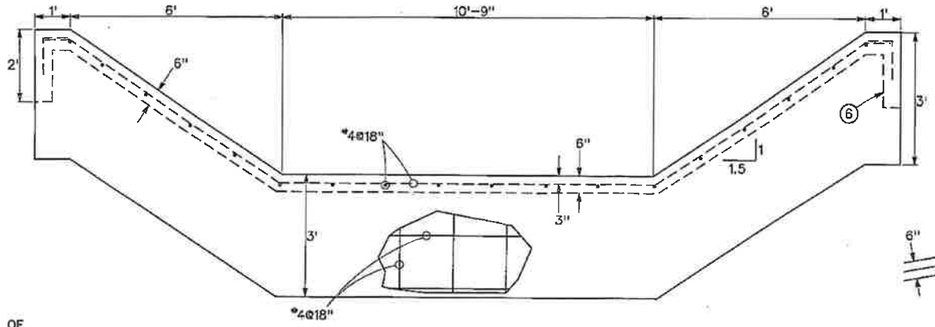
42" CMP CULVERT PROFILE

5' 0 5'

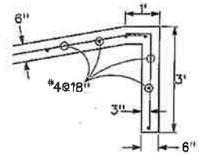


42" CMP CULVERT PLAN

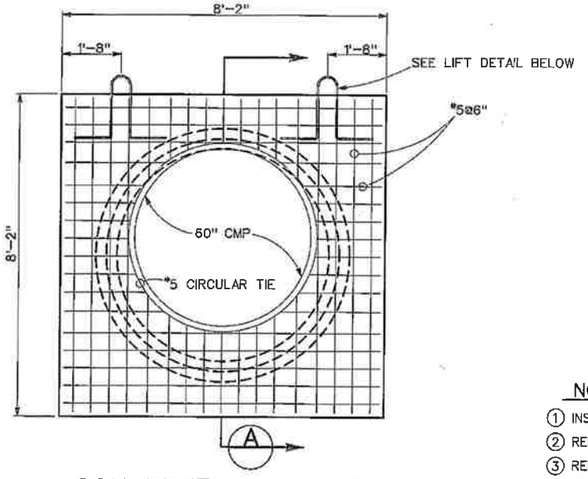
5' 0 5'



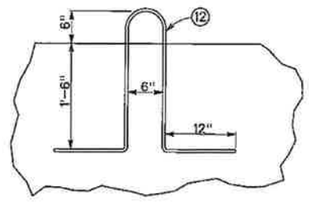
SECTION B
NTS



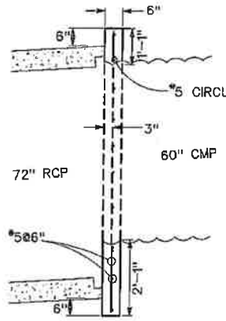
SECTION C
NTS



CONCRETE BULKHEAD
NTS



LIFT DETAIL
NTS



SECTION A
NTS

NOTES

1. INSTALL 36' – 42" CMP (T= 0.079").
2. REMOVE EX 72" CMP
3. REMOVE EX PIPE HEADWALL.
4. CONSTRUCT CONCRETE HEADWALL PER DETAILS ON SHEET 14.
5. REMOVE EX FENCE AND REPLACE IN KIND.
6. CONSTRUCT 2' CUT OFF WALL PER STD CH 326.
7. PROTECT IN PLACE EX POWER POLE AND GUY WITH ANCHOR.
8. GUY WITH ANCHOR TO BE RELOCATED BY OTHERS.
9. REMOVE EX ROCK AND PLACE AT DOWNSTREAM END OF 42" CMP AS DIRECTED BY ENGINEER.
10. SLURRY BACKFILL 42" CMP TO 1' BELOW EXISTING GRADE.
11. REMOVE AND PLUG INTERFERING PORTION OF ABANDONED 3" GAS LINE.
12. LIFTS SHALL BE STEEL WOVEN CABLE OF MIN. ¾" DIAMETER. WEAVE CABLE THROUGH HORIZONTAL BARS. COAT EXPOSED PORTION OF CABLE LIFT WITH AN APPROVED BITUMINOUS PAINT PRIOR TO BACKFILLING TRENCH.

REGISTERED PROFESSIONAL ENGINEER
CLYDE D. JOHNSON
No. 30539
Exp. 3-31-04
CIVIL
STATE OF CALIFORNIA

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK

REF.	REVISIONS	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

DESIGNED BY: M. WONG
DRAWN BY: H. VERDUSCO
DATE DRAWN: FEB. 2001
CHECKED BY: BEJ

RECOMMENDED FOR APPROVAL BY: DESIGN ENGINEER R.E. No. 30539 DATE: 3/15/01

APPROVED BY: CHIEF ENGINEER R.E. NO. 22035 DATE: 3/15/01

BELLTOWN LINE D
STAGE 1
42" CULVERT AND MISCELLANEOUS DETAILS

PROJECT NO. 1-0-0155
DRAWING NO. 1-590
SHEET NO. 15 OF 57

Julianne F.

From: Russell, Eric [ERUSSELL@rcflood.org]
Sent: Tuesday, June 23, 2015 10:54 AM
To: 'Julianne F.'
Subject: RE: TEI Job#3384

Per our phone conversation, after looking at the design backup for this facility, it is a Q100 flow rate.

From: Julianne F. [mailto:julianne@thieneseng.com]
Sent: Tuesday, June 23, 2015 9:49 AM
To: Russell, Eric
Subject: TEI Job#3384

Hi Eric,

I left you a voicemail yesterday, but thought I would also send an email with some backing information. You were working with Jill Johnson from our office regarding our project drainage tie-in. As you mentioned in the attached email to Jill, our project site ties into the Belltown Master Plan Line D. When I looked on the plans (see attached), the capacity shows a Q design. Can you please confirm what capacity this drain is, 100-year or other, so that we know how much water we can drain to this storm drain.

Thank you,

Julianne Frabizio, PE, QSD
Water Resource Engineer

THIENES ENGINEERING, INC.
14349 Firestone Blvd. | La Mirada, California | 90638
P: 714.521.4811 ext: 231 F: 714.521.4173
julianne@thieneseng.com

APPENDIX B

HYDROLOGY CALCULATIONS

EXISTING CONDITION

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                    (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1435

                        Analysis prepared by:

                       Thienes Engineering, Inc
                         14349 Firestone Blvd
                         La Mirada, CA 90638
                          www.thineseng.com

 ************************ DESCRIPTION OF STUDY ************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                       *
* EXISTING CONDITION 100-YEAR                                         *
* (NODE 100-101)                                                      *
 ************************************************************************

  FILE NAME: X:\3384\X100.DAT
  TIME/DATE OF STUDY: 10:54 06/05/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   757.00
  UPSTREAM ELEVATION(FEET) =    964.42
  DOWNSTREAM ELEVATION(FEET) =    940.72
  ELEVATION DIFFERENCE(FEET) =     23.70
  TC = 0.533*[(  757.00**3)/(    23.70)]**.2 =   15.098
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.357
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4087
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      3.79
  TOTAL AREA(ACRES) =      3.93   TOTAL RUNOFF(CFS) =      3.79

************************************************************************
  FLOW PROCESS FROM NODE    100.00 TO NODE    101.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.357
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7572
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    1.07   SUBAREA RUNOFF(CFS) =    1.91
  TOTAL AREA(ACRES) =        5.0   TOTAL RUNOFF(CFS) =       5.69
```

```
  TC(MIN.) =   15.10
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        5.0  TC(MIN.) =     15.10
  PEAK FLOW RATE(CFS)   =       5.69
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                     (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-99 Advanced Engineering Software (aes)
             Ver. 1.5A Release Date: 01/01/99  License ID 1435

                          Analysis prepared by:

                            THIENES ENGINEERING
                          16800 VALLEY VIEW AVENUE
                            LA MIRADA CA 90638
                     PH: (714) 521-4811 FAX: (714) 521-4173

 ************************* DESCRIPTION OF STUDY *************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                         *
* EXISTING CONDITION 100-YEAR                                           *
* (NODE 200-203)                                                        *
 ************************************************************************

  FILE NAME: C:\XDRIVE\3384\X200.DAT
  TIME/DATE OF STUDY: 16:43 06/02/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH =   596.00
  UPSTREAM ELEVATION =    963.14
  DOWNSTREAM ELEVATION =    924.00
  ELEVATION DIFFERENCE =     39.14
  TC = 0.533*[(  596.00**3)/(    39.14)]**.2 =   11.831
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.675
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4371
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      5.43
  TOTAL AREA(ACRES) =      4.64   TOTAL RUNOFF(CFS) =      5.43

************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    924.00  DOWNSTREAM(FEET) =    895.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   677.00   CHANNEL SLOPE =  0.0428
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.43
```

```
  FLOW VELOCITY(FEET/SEC) =   2.07   FLOW DEPTH(FEET) =   0.10
  TRAVEL TIME(MIN.) =   5.45   Tc(MIN.) =  17.28
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =  1273.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.197
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3931
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    3.76   SUBAREA RUNOFF(CFS) =    3.25
  TOTAL AREA(ACRES) =     8.40   TOTAL RUNOFF(CFS) =    8.67
  TC(MIN) =  17.28

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    203.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    895.00  DOWNSTREAM(FEET) =    885.28
  CHANNEL LENGTH THRU SUBAREA(FEET) =   308.00   CHANNEL SLOPE =  0.0316
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.67
  FLOW VELOCITY(FEET/SEC) =   2.11   FLOW DEPTH(FEET) =   0.15
  TRAVEL TIME(MIN.) =   2.44   Tc(MIN.) =  19.71
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    203.00 =  1581.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    203.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.051
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3780
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    4.78   SUBAREA RUNOFF(CFS) =    3.71
  TOTAL AREA(ACRES) =    13.18   TOTAL RUNOFF(CFS) =   12.38
  TC(MIN) =  19.71

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    203.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.051
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6966
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.50   SUBAREA RUNOFF(CFS) =    3.57
  TOTAL AREA(ACRES) =    15.68   TOTAL RUNOFF(CFS) =   15.95
  TC(MIN) =  19.71

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    203.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.051
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7397
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    2.54   SUBAREA RUNOFF(CFS) =    3.85
  TOTAL AREA(ACRES) =    18.22   TOTAL RUNOFF(CFS) =   19.81
  TC(MIN) =  19.71
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =     18.22  TC(MIN.) =     19.71
  PEAK FLOW RATE(CFS)   =     19.81
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-99 Advanced Engineering Software (aes)
             Ver. 1.5A Release Date: 01/01/99  License ID 1435

                          Analysis prepared by:

                            THIENES ENGINEERING
                          16800 VALLEY VIEW AVENUE
                            LA MIRADA CA 90638
                     PH: (714) 521-4811 FAX: (714) 521-4173

 ************************* DESCRIPTION OF STUDY *************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                         *
* EXISTING CONDITION 100-YEAR                                           *
* (NODE 300-301)                                                        *
 ************************************************************************

  FILE NAME: C:\XDRIVE\3384\X300.DAT
  TIME/DATE OF STUDY: 16:48 06/02/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH =   719.00
  UPSTREAM ELEVATION =    945.80
  DOWNSTREAM ELEVATION =    888.44
  ELEVATION DIFFERENCE =     57.36
  TC = 0.533*[(  719.00**3)/(    57.36)]**.2 =   12.266
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.625
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4329
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      2.23
  TOTAL AREA(ACRES) =      1.96   TOTAL RUNOFF(CFS) =      2.23

************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.625
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7328
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.60   SUBAREA RUNOFF(CFS) =    1.15
  TOTAL AREA(ACRES) =     2.56   TOTAL RUNOFF(CFS) =    3.38
  TC(MIN) =  12.27
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.625
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7697
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    2.50   SUBAREA RUNOFF(CFS) =    5.05
  TOTAL AREA(ACRES) =     5.06   TOTAL RUNOFF(CFS) =    8.43
  TC(MIN) =  12.27
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =      5.06  TC(MIN.) =     12.27
  PEAK FLOW RATE(CFS)   =      8.43
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS

1
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-99 Advanced Engineering Software (aes)
             Ver. 1.5A Release Date: 01/01/99  License ID 1435

                          Analysis prepared by:

                            THIENES ENGINEERING
                          16800 VALLEY VIEW AVENUE
                            LA MIRADA CA 90638
                     PH: (714) 521-4811 FAX: (714) 521-4173

 ************************* DESCRIPTION OF STUDY *************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                         *
* EXISTING CONDITION 100-YEAR                                           *
* (NODE 400-403)                                                        *
 ************************************************************************

  FILE NAME: C:\XDRIVE\3384\X400.DAT
  TIME/DATE OF STUDY: 16:57 06/02/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH =   697.00
  UPSTREAM ELEVATION =    963.09
  DOWNSTREAM ELEVATION =    907.14
  ELEVATION DIFFERENCE =     55.95
  TC = 0.533*[(  697.00**3)/(    55.95)]**.2 =   12.100
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.644
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4345
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      5.26
  TOTAL AREA(ACRES) =      4.58   TOTAL RUNOFF(CFS) =      5.26

************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  51
------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    907.14  DOWNSTREAM(FEET) =    900.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   382.00   CHANNEL SLOPE =  0.0187
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      5.26
```

```
  FLOW VELOCITY(FEET/SEC) =   1.49   FLOW DEPTH(FEET) =   0.13
  TRAVEL TIME(MIN.) =   4.27   Tc(MIN.) =  16.37
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =  1079.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.260
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3993
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    3.09   SUBAREA RUNOFF(CFS) =    2.79
  TOTAL AREA(ACRES) =     7.67   TOTAL RUNOFF(CFS) =    8.05
  TC(MIN) =  16.37

****************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.260
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7114
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.28   SUBAREA RUNOFF(CFS) =    0.45
  TOTAL AREA(ACRES) =     7.95   TOTAL RUNOFF(CFS) =    8.50
  TC(MIN) =  16.37

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    900.00  DOWNSTREAM(FEET) =    885.55
  CHANNEL LENGTH THRU SUBAREA(FEET) =   381.00   CHANNEL SLOPE =  0.0379
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      8.50
  FLOW VELOCITY(FEET/SEC) =   2.24   FLOW DEPTH(FEET) =   0.14
  TRAVEL TIME(MIN.) =   2.83   Tc(MIN.) =  19.20
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    403.00 =  1460.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.080
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3810
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.88   SUBAREA RUNOFF(CFS) =    0.70
  TOTAL AREA(ACRES) =     8.83   TOTAL RUNOFF(CFS) =    9.20
  TC(MIN) =  19.20

****************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    403.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.080
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6987
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.39   SUBAREA RUNOFF(CFS) =    3.47
  TOTAL AREA(ACRES) =    11.22   TOTAL RUNOFF(CFS) =   12.67
  TC(MIN) =  19.20
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =     11.22  TC(MIN.) =     19.20
  PEAK FLOW RATE(CFS)   =     12.67
============================================================================
============================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                    (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1435

                         Analysis prepared by:

                        Thienes Engineering, Inc
                          14349 Firestone Blvd
                          La Mirada, CA 90638
                           www.thineseng.com

 ************************ DESCRIPTION OF STUDY ************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                       *
* EXISTING CONDITION 100-YEAR                                         *
* (NODE 500-504)                                                      *
 ************************************************************************

  FILE NAME: X:\3384\X500.DAT
  TIME/DATE OF STUDY: 10:57 06/05/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  ================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   756.00
  UPSTREAM ELEVATION(FEET) =    971.66
  DOWNSTREAM ELEVATION(FEET) =    908.78
  ELEVATION DIFFERENCE(FEET) =     62.88
  TC = 0.533*[(  756.00**3)/(    62.88)]**.2 =   12.411
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.609
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4315
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      3.39
  TOTAL AREA(ACRES) =      3.01   TOTAL RUNOFF(CFS) =      3.39

************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.609
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7320
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.59   SUBAREA RUNOFF(CFS) =    1.13
  TOTAL AREA(ACRES) =        3.6   TOTAL RUNOFF(CFS) =       4.52
```

```
  TC(MIN.) =   12.41

****************************************************************************
  FLOW PROCESS FROM NODE    500.00 TO NODE    501.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.609
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7690
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.41   SUBAREA RUNOFF(CFS) =    0.82
  TOTAL AREA(ACRES) =        4.0   TOTAL RUNOFF(CFS) =       5.34
  TC(MIN.) =   12.41

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    908.78  DOWNSTREAM(FEET) =    901.39
  CHANNEL LENGTH THRU SUBAREA(FEET) =   320.00   CHANNEL SLOPE =  0.0231
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =       5.34
  FLOW VELOCITY(FEET/SEC.) =   1.63   FLOW DEPTH(FEET) =   0.12
  TRAVEL TIME(MIN.) =   3.28   Tc(MIN.) =   15.69
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    502.00 =    1076.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.310
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4042
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    1.30   SUBAREA RUNOFF(CFS) =    1.21
  TOTAL AREA(ACRES) =        5.3   TOTAL RUNOFF(CFS) =       6.55
  TC(MIN.) =   15.69

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.310
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7147
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.82   SUBAREA RUNOFF(CFS) =    4.66
  TOTAL AREA(ACRES) =        8.1   TOTAL RUNOFF(CFS) =      11.21
  TC(MIN.) =   15.69

****************************************************************************
  FLOW PROCESS FROM NODE    501.00 TO NODE    502.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.310
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7548
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.51   SUBAREA RUNOFF(CFS) =    0.89
  TOTAL AREA(ACRES) =        8.6   TOTAL RUNOFF(CFS) =      12.10
  TC(MIN.) =   15.69

****************************************************************************
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    901.39  DOWNSTREAM(FEET) =    886.56
  CHANNEL LENGTH THRU SUBAREA(FEET) =   539.00   CHANNEL SLOPE =  0.0275
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      12.10
  FLOW VELOCITY(FEET/SEC.) =   2.22   FLOW DEPTH(FEET) =   0.19
  TRAVEL TIME(MIN.) =   4.05   Tc(MIN.) =   19.73
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    503.00 =    1615.00 FEET.

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

```
  FLOW PROCESS FROM NODE    502.00 TO NODE    503.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.050
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6965
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    3.08   SUBAREA RUNOFF(CFS) =    4.40
  TOTAL AREA(ACRES) =       11.7   TOTAL RUNOFF(CFS) =      16.50
  TC(MIN.) =   19.73

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  51
----------------------------------------------------------------------------
  >>>>>COMPUTE TRAPEZOIDAL CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA (EXISTING ELEMENT)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    886.56  DOWNSTREAM(FEET) =    884.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   323.00   CHANNEL SLOPE =  0.0079
  CHANNEL BASE(FEET) =   20.00   "Z" FACTOR =  50.000
  MANNING'S FACTOR = 0.030   MAXIMUM DEPTH(FEET) =   2.00
  CHANNEL FLOW THRU SUBAREA(CFS) =      16.50
  FLOW VELOCITY(FEET/SEC.) =   1.57   FLOW DEPTH(FEET) =   0.30
  TRAVEL TIME(MIN.) =   3.43   Tc(MIN.) =   23.17
  LONGEST FLOWPATH FROM NODE    500.00 TO NODE    504.00 =    1938.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.886
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3597
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    1.47   SUBAREA RUNOFF(CFS) =    1.00
  TOTAL AREA(ACRES) =       13.2   TOTAL RUNOFF(CFS) =      17.49
  TC(MIN.) =   23.17

****************************************************************************
  FLOW PROCESS FROM NODE    503.00 TO NODE    504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.886
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6831
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    6.03   SUBAREA RUNOFF(CFS) =    7.77
  TOTAL AREA(ACRES) =       19.2   TOTAL RUNOFF(CFS) =      25.26
  TC(MIN.) =   23.17

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.886
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3597
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =   14.19   SUBAREA RUNOFF(CFS) =    9.63
  TOTAL AREA(ACRES) =       33.4   TOTAL RUNOFF(CFS) =      34.89
  TC(MIN.) =   23.17

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.886
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .6831
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.84   SUBAREA RUNOFF(CFS) =    3.66
  TOTAL AREA(ACRES) =       36.2   TOTAL RUNOFF(CFS) =      38.55
  TC(MIN.) =   23.17

****************************************************************************
  FLOW PROCESS FROM NODE    504.00 TO NODE    504.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  1.886
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7284
```

```
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.86   SUBAREA RUNOFF(CFS) =    1.18
  TOTAL AREA(ACRES) =       37.1   TOTAL RUNOFF(CFS) =      39.73
  TC(MIN.) =   23.17
================================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =       37.1  TC(MIN.) =     23.17
  PEAK FLOW RATE(CFS)   =      39.73
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS
```

```
************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                     (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                     (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1435

                         Analysis prepared by:

                        Thienes Engineering, Inc
                          14349 Firestone Blvd
                          La Mirada, CA 90638
                           www.thineseng.com

 ************************ DESCRIPTION OF STUDY ************************
* JOB #3384 PROFICIENCY RUBIDOUX, JURUPA VALLEY                       *
* EXISTING CONDITION 100-YEAR                                         *
* (NODE 600-601)                                                      *
 ************************************************************************

  FILE NAME: X:\3384\X600.DAT
  TIME/DATE OF STUDY: 11:09 06/05/2023
------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

************************************************************************
  FLOW PROCESS FROM NODE    600.00 TO NODE    601.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   252.00
  UPSTREAM ELEVATION(FEET) =    879.04
  DOWNSTREAM ELEVATION(FEET) =    866.63
  ELEVATION DIFFERENCE(FEET) =     12.41
  TC = 0.303*[(  252.00**3)/(    12.41)]**.2 =    5.054
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.163
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8887
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      9.25
  TOTAL AREA(ACRES) =      2.50   TOTAL RUNOFF(CFS) =      9.25
========================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =        2.5  TC(MIN.) =      5.05
  PEAK FLOW RATE(CFS)   =       9.25
========================================================================
========================================================================
  END OF RATIONAL METHOD ANALYSIS
```

PROPOSED CONDITION

```
**************************************************************************
          RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-2016 Advanced Engineering Software (aes)
                    (Rational Tabling Version 23.0)
                Release Date: 07/01/2016  License ID 1435

                        Analysis prepared by:




 ************************ DESCRIPTION OF STUDY *************************
* TEI JOB NUMBER 3384                                                  *
* PROPOSED CONDITION                                                   *
* 100-YR STORM EVENT                                                   *
 **********************************************************************

  FILE NAME: W:\3384\P100.DAT
  TIME/DATE OF STUDY: 12:56 05/18/2023
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

**************************************************************************
  FLOW PROCESS FROM NODE     10.00 TO NODE     11.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   416.00
  UPSTREAM ELEVATION(FEET) =    993.00
  DOWNSTREAM ELEVATION(FEET) =    961.00
  ELEVATION DIFFERENCE(FEET) =     32.00
  TC = 0.303*[(  416.00**3)/(    32.00)]**.2 =    5.650
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.929
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8623
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      6.10
```

```
  TOTAL AREA(ACRES) =      1.80   TOTAL RUNOFF(CFS) =      6.10

****************************************************************************
  FLOW PROCESS FROM NODE     11.00 TO NODE     11.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.929
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8909
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.10   SUBAREA RUNOFF(CFS) =    0.35
  TOTAL AREA(ACRES) =        1.9   TOTAL RUNOFF(CFS) =       6.45
  TC(MIN.) =    5.65

****************************************************************************
  FLOW PROCESS FROM NODE     11.00 TO NODE     12.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   956.90  DOWNSTREAM(FEET) =   928.70
  FLOW LENGTH(FEET) =    59.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   4.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  27.45
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       6.45
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    5.69
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     12.00 =     475.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     12.00 TO NODE     12.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.916
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8622
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    1.01
  TOTAL AREA(ACRES) =        2.2   TOTAL RUNOFF(CFS) =       7.46
  TC(MIN.) =    5.69

****************************************************************************
  FLOW PROCESS FROM NODE     12.00 TO NODE     24.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   928.70  DOWNSTREAM(FEET) =   912.30
  FLOW LENGTH(FEET) =   395.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   9.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.12
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       7.46
  PIPE TRAVEL TIME(MIN.) =   0.59    Tc(MIN.) =    6.28
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     24.00 =     870.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     24.00 TO NODE     24.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    6.28
  RAINFALL INTENSITY(INCH/HR) =   3.72
  TOTAL STREAM AREA(ACRES) =     2.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.46
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     20.00 TO NODE     21.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   269.00
  UPSTREAM ELEVATION(FEET) =    984.00
  DOWNSTREAM ELEVATION(FEET) =    962.00
  ELEVATION DIFFERENCE(FEET) =     22.00
  TC = 0.303*[(  269.00**3)/(    22.00)]**.2 =    4.688
  COMPUTED TIME OF CONCENTRATION INCREASED TO 5 MIN.
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.187
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8637
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      2.53
  TOTAL AREA(ACRES) =      0.70   TOTAL RUNOFF(CFS) =      2.53

****************************************************************************
  FLOW PROCESS FROM NODE     21.00 TO NODE     22.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   955.20  DOWNSTREAM(FEET) =   929.20
  FLOW LENGTH(FEET) =    59.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   2.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  20.42
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.53
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =    5.05
  LONGEST FLOWPATH FROM NODE     20.00 TO NODE     22.00 =     328.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     22.00 TO NODE     22.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.166
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8636
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    1.08
  TOTAL AREA(ACRES) =        1.0   TOTAL RUNOFF(CFS) =       3.61
  TC(MIN.) =    5.05

****************************************************************************
  FLOW PROCESS FROM NODE     22.00 TO NODE     23.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   929.20  DOWNSTREAM(FEET) =   919.60
  FLOW LENGTH(FEET) =    33.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  19.50
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.61
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =    5.08
  LONGEST FLOWPATH FROM NODE     20.00 TO NODE     23.00 =     361.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     23.00 TO NODE     23.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.154
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8635
 SOIL CLASSIFICATION IS "A"
 SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    3.59
 TOTAL AREA(ACRES) =        2.0   TOTAL RUNOFF(CFS) =       7.20
 TC(MIN.) =    5.08

****************************************************************************
 FLOW PROCESS FROM NODE     23.00 TO NODE     24.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   919.60  DOWNSTREAM(FEET) =   909.30
 FLOW LENGTH(FEET) =   112.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.9 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  15.36
 ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =       7.20
 PIPE TRAVEL TIME(MIN.) =   0.12    Tc(MIN.) =    5.20
 LONGEST FLOWPATH FROM NODE     20.00 TO NODE     24.00 =     473.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     24.00 TO NODE     24.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =    5.20
 RAINFALL INTENSITY(INCH/HR) =   4.10
 TOTAL STREAM AREA(ACRES) =     2.00
 PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.20

 ** CONFLUENCE DATA **
 STREAM     RUNOFF       Tc      INTENSITY      AREA
 NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1        7.46     6.28        3.720          2.20
     2        7.20     5.20        4.103          2.00

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       13.38     5.20       4.103
     2       13.99     6.28       3.720

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =      13.99   Tc(MIN.) =    6.28
 TOTAL AREA(ACRES) =        4.2
 LONGEST FLOWPATH FROM NODE     10.00 TO NODE     24.00 =     870.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     24.00 TO NODE     33.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   909.30  DOWNSTREAM(FEET) =   908.20
 FLOW LENGTH(FEET) =   211.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  24.0 INCH PIPE IS  16.4 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   6.12
 ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      13.99
 PIPE TRAVEL TIME(MIN.) =   0.58    Tc(MIN.) =    6.85
 LONGEST FLOWPATH FROM NODE     10.00 TO NODE     33.00 =    1081.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     33.00 TO NODE     33.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    6.85
  RAINFALL INTENSITY(INCH/HR) =   3.55
  TOTAL STREAM AREA(ACRES) =     4.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.99

****************************************************************************
  FLOW PROCESS FROM NODE     30.00 TO NODE     31.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   367.00
  UPSTREAM ELEVATION(FEET) =    993.00
  DOWNSTREAM ELEVATION(FEET) =    963.00
  ELEVATION DIFFERENCE(FEET) =     30.00
  TC = 0.303*[(  367.00**3)/(    30.00)]**.2 =    5.308
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  4.058
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8630
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      3.50
  TOTAL AREA(ACRES) =      1.00   TOTAL RUNOFF(CFS) =      3.50

****************************************************************************
  FLOW PROCESS FROM NODE     31.00 TO NODE     32.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   958.90  DOWNSTREAM(FEET) =   910.70
  FLOW LENGTH(FEET) =   109.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   3.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  22.45
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.50
  PIPE TRAVEL TIME(MIN.) =   0.08    Tc(MIN.) =    5.39
  LONGEST FLOWPATH FROM NODE     30.00 TO NODE     32.00 =     476.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     32.00 TO NODE     33.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   910.70  DOWNSTREAM(FEET) =   908.70
  FLOW LENGTH(FEET) =    29.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   4.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  11.51
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       3.50
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    5.43
  LONGEST FLOWPATH FROM NODE     30.00 TO NODE     33.00 =     505.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     33.00 TO NODE     33.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
```

```
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    5.43
  RAINFALL INTENSITY(INCH/HR) =   4.01
  TOTAL STREAM AREA(ACRES) =     1.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      3.50

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       13.38     5.78        3.884          4.20
      1       13.99     6.85        3.554          4.20
      2        3.50     5.43        4.010          1.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       16.08     5.43       4.010
      2       16.77     5.78       3.884
      3       17.09     6.85       3.554

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      17.09   Tc(MIN.) =    6.85
  TOTAL AREA(ACRES) =        5.2
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     33.00 =    1081.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     33.00 TO NODE     43.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   908.70  DOWNSTREAM(FEET) =   907.40
  FLOW LENGTH(FEET) =   254.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  19.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.20
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      17.09
  PIPE TRAVEL TIME(MIN.) =   0.68    Tc(MIN.) =    7.53
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     43.00 =    1335.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     43.00 TO NODE     43.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.53
  RAINFALL INTENSITY(INCH/HR) =   3.38
  TOTAL STREAM AREA(ACRES) =     5.20
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     17.09

****************************************************************************
  FLOW PROCESS FROM NODE     40.00 TO NODE     41.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   509.00
  UPSTREAM ELEVATION(FEET) =    993.00
  DOWNSTREAM ELEVATION(FEET) =    960.00
  ELEVATION DIFFERENCE(FEET) =     33.00
```

```
  TC = 0.303*[(  509.00**3)/(    33.00)]**.2 =    6.337
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.701
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8610
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      7.01
  TOTAL AREA(ACRES) =      2.20   TOTAL RUNOFF(CFS) =      7.01

****************************************************************************
  FLOW PROCESS FROM NODE     41.00 TO NODE     41.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.701
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8904
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.40   SUBAREA RUNOFF(CFS) =    1.32
  TOTAL AREA(ACRES) =        2.6   TOTAL RUNOFF(CFS) =       8.33
  TC(MIN.) =    6.34

****************************************************************************
  FLOW PROCESS FROM NODE     41.00 TO NODE     42.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   956.20  DOWNSTREAM(FEET) =   930.60
  FLOW LENGTH(FEET) =    60.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   4.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  28.29
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.33
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =    6.37
  LONGEST FLOWPATH FROM NODE     40.00 TO NODE     42.00 =     569.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     42.00 TO NODE     42.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.691
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8609
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    2.22
  TOTAL AREA(ACRES) =        3.3   TOTAL RUNOFF(CFS) =      10.55
  TC(MIN.) =    6.37

****************************************************************************
  FLOW PROCESS FROM NODE     42.00 TO NODE     43.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   930.60  DOWNSTREAM(FEET) =   908.00
  FLOW LENGTH(FEET) =    57.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  29.31
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      10.55
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =    6.41
  LONGEST FLOWPATH FROM NODE     40.00 TO NODE     43.00 =     626.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     43.00 TO NODE     43.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.681
```

```
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .5085
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.40   SUBAREA RUNOFF(CFS) =    0.75
  TOTAL AREA(ACRES) =        3.7   TOTAL RUNOFF(CFS) =      11.30
  TC(MIN.) =    6.41

****************************************************************************
  FLOW PROCESS FROM NODE     43.00 TO NODE     43.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    6.41
  RAINFALL INTENSITY(INCH/HR) =   3.68
  TOTAL STREAM AREA(ACRES) =     3.70
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     11.30

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       16.08     6.12        3.770          5.20
      1       16.77     6.46        3.664          5.20
      1       17.09     7.53        3.383          5.20
      2       11.30     6.41        3.681          3.70

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       26.87     6.12       3.770
      2       27.93     6.41       3.681
      3       28.02     6.46       3.664
      4       27.48     7.53       3.383

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      28.02   Tc(MIN.) =    6.46
  TOTAL AREA(ACRES) =        8.9
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     43.00 =    1335.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     43.00 TO NODE     58.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   908.00  DOWNSTREAM(FEET) =   906.30
  FLOW LENGTH(FEET) =   362.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  23.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.88
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      28.02
  PIPE TRAVEL TIME(MIN.) =   0.88    Tc(MIN.) =    7.34
  LONGEST FLOWPATH FROM NODE     10.00 TO NODE     58.00 =    1697.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     58.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.34
  RAINFALL INTENSITY(INCH/HR) =   3.43
  TOTAL STREAM AREA(ACRES) =     8.90
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     28.02
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     50.00 TO NODE     51.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   998.00
  UPSTREAM ELEVATION(FEET) =   1714.00
  DOWNSTREAM ELEVATION(FEET) =   1270.00
  ELEVATION DIFFERENCE(FEET) =    444.00
  TC = 0.533*[(  998.00**3)/(   444.00)]**.2 =    9.918
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.932
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7815
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =     11.46
  TOTAL AREA(ACRES) =      5.00   TOTAL RUNOFF(CFS) =     11.46

****************************************************************************
  FLOW PROCESS FROM NODE     51.00 TO NODE     52.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1270.00  DOWNSTREAM(FEET) =   1105.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   355.00   CHANNEL SLOPE =  0.4648
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =      11.46
  FLOW VELOCITY(FEET/SEC) =   8.18 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.72   Tc(MIN.) =   10.64
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     52.00 =    1353.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     52.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.827
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7777
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    4.50   SUBAREA RUNOFF(CFS) =    9.89
  TOTAL AREA(ACRES) =        9.5   TOTAL RUNOFF(CFS) =      21.35
  TC(MIN.) =   10.64

****************************************************************************
  FLOW PROCESS FROM NODE     52.00 TO NODE     53.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1105.00  DOWNSTREAM(FEET) =   1000.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   481.00   CHANNEL SLOPE =  0.2183
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =      21.35
  FLOW VELOCITY(FEET/SEC) =   9.64 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.83   Tc(MIN.) =   11.47
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     53.00 =    1834.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     53.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.718
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7735
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    5.80   SUBAREA RUNOFF(CFS) =   12.20
```

```
  TOTAL AREA(ACRES) =       15.3   TOTAL RUNOFF(CFS) =      33.55
  TC(MIN.) =   11.47

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     53.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.718
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4407
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.36
  TOTAL AREA(ACRES) =       15.6   TOTAL RUNOFF(CFS) =      33.91
  TC(MIN.) =   11.47

****************************************************************************
  FLOW PROCESS FROM NODE     53.00 TO NODE     54.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1000.00  DOWNSTREAM(FEET) =    993.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   142.00   CHANNEL SLOPE =  0.0493
  CHANNEL FLOW THRU SUBAREA(CFS) =      33.91
  FLOW VELOCITY(FEET/SEC) =   7.69 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.31   Tc(MIN.) =   11.78
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     54.00 =    1976.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     54.00 TO NODE     54.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.681
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4376
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    0.82
  TOTAL AREA(ACRES) =       16.3   TOTAL RUNOFF(CFS) =      34.73
  TC(MIN.) =   11.78

****************************************************************************
  FLOW PROCESS FROM NODE     54.00 TO NODE     54.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.681
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7720
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =   10.80   SUBAREA RUNOFF(CFS) =   22.36
  TOTAL AREA(ACRES) =       27.1   TOTAL RUNOFF(CFS) =      57.09
  TC(MIN.) =   11.78

****************************************************************************
  FLOW PROCESS FROM NODE     54.00 TO NODE     55.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    993.00  DOWNSTREAM(FEET) =    972.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   413.00   CHANNEL SLOPE =  0.0508
  CHANNEL FLOW THRU SUBAREA(CFS) =      57.09
  FLOW VELOCITY(FEET/SEC) =   9.07 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.76   Tc(MIN.) =   12.54
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     55.00 =    2389.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     55.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
```

```
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.596
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7684
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    9.50   SUBAREA RUNOFF(CFS) =   18.95
  TOTAL AREA(ACRES) =       36.6   TOTAL RUNOFF(CFS) =      76.03
  TC(MIN.) =   12.54

****************************************************************************
  FLOW PROCESS FROM NODE     55.00 TO NODE     56.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    972.00  DOWNSTREAM(FEET) =    957.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   162.00   CHANNEL SLOPE =  0.0926
  CHANNEL FLOW THRU SUBAREA(CFS) =      76.03
  FLOW VELOCITY(FEET/SEC) =  13.31 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =   12.74
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     56.00 =    2551.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.574
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4284
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.80   SUBAREA RUNOFF(CFS) =    0.88
  TOTAL AREA(ACRES) =       37.4   TOTAL RUNOFF(CFS) =      76.92
  TC(MIN.) =   12.74

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     56.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.574
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7675
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    1.50   SUBAREA RUNOFF(CFS) =    2.96
  TOTAL AREA(ACRES) =       38.9   TOTAL RUNOFF(CFS) =      79.88
  TC(MIN.) =   12.74

****************************************************************************
  FLOW PROCESS FROM NODE     56.00 TO NODE     57.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   951.30  DOWNSTREAM(FEET) =   927.80
  FLOW LENGTH(FEET) =    61.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  13.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  47.64
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      79.88
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =   12.76
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     57.00 =    2612.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     57.00 TO NODE     57.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.572
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4282
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.50   SUBAREA RUNOFF(CFS) =    0.55
```

```
  TOTAL AREA(ACRES) =       39.4   TOTAL RUNOFF(CFS) =      80.43
  TC(MIN.) =   12.76

****************************************************************************
  FLOW PROCESS FROM NODE     57.00 TO NODE     58.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   927.80  DOWNSTREAM(FEET) =   906.90
  FLOW LENGTH(FEET) =    78.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  16.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  40.91
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      80.43
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =   12.79
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     58.00 =    2690.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     58.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.569
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4279
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    1.10
  TOTAL AREA(ACRES) =       40.4   TOTAL RUNOFF(CFS) =      81.53
  TC(MIN.) =   12.79

****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     58.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   12.79
  RAINFALL INTENSITY(INCH/HR) =   2.57
  TOTAL STREAM AREA(ACRES) =    40.40
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     81.53

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       26.87     7.00        3.516          8.90
      1       27.93     7.28        3.443          8.90
      1       28.02     7.34        3.430          8.90
      1       27.48     8.41        3.194          8.90
      2       81.53    12.79        2.569         40.40

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       71.45     7.00       3.516
      2       74.33     7.28       3.443
      3       74.77     7.34       3.430
      4       81.09     8.41       3.194
      5      103.63    12.79       2.569

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     103.63   Tc(MIN.) =   12.79
  TOTAL AREA(ACRES) =       49.3
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     58.00 =    2690.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE     58.00 TO NODE     65.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   906.20  DOWNSTREAM(FEET) =   905.30
  FLOW LENGTH(FEET) =   323.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  54.0 INCH PIPE IS  41.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.84
  ESTIMATED PIPE DIAMETER(INCH) =  54.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     103.63
  PIPE TRAVEL TIME(MIN.) =   0.69    Tc(MIN.) =   13.48
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     65.00 =    3013.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     65.00 TO NODE     65.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   13.48
  RAINFALL INTENSITY(INCH/HR) =   2.50
  TOTAL STREAM AREA(ACRES) =    49.30
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    103.63

****************************************************************************
  FLOW PROCESS FROM NODE     60.00 TO NODE     61.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   999.00
  UPSTREAM ELEVATION(FEET) =   1550.00
  DOWNSTREAM ELEVATION(FEET) =   1035.00
  ELEVATION DIFFERENCE(FEET) =    515.00
  TC = 0.533*[(  999.00**3)/(   515.00)]**.2 =    9.633
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.977
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7831
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      3.50
  TOTAL AREA(ACRES) =      1.50   TOTAL RUNOFF(CFS) =      3.50

****************************************************************************
  FLOW PROCESS FROM NODE     61.00 TO NODE     62.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1035.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   206.00   CHANNEL SLOPE =  0.2913
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       3.50
  FLOW VELOCITY(FEET/SEC) =   6.14 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.56   Tc(MIN.) =   10.19
  LONGEST FLOWPATH FROM NODE     60.00 TO NODE     62.00 =    1205.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     62.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.891
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7801
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    3.20   SUBAREA RUNOFF(CFS) =    7.22
```

```
  TOTAL AREA(ACRES) =        4.7   TOTAL RUNOFF(CFS) =      10.71
  TC(MIN.) =   10.19

****************************************************************************
  FLOW PROCESS FROM NODE     62.00 TO NODE     63.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    967.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =    67.00   CHANNEL SLOPE =  0.1194
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =      10.71
  FLOW VELOCITY(FEET/SEC) =   8.04 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.14   Tc(MIN.) =   10.33
  LONGEST FLOWPATH FROM NODE     60.00 TO NODE     63.00 =    1272.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     63.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.871
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4529
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.20   SUBAREA RUNOFF(CFS) =    0.26
  TOTAL AREA(ACRES) =        4.9   TOTAL RUNOFF(CFS) =      10.97
  TC(MIN.) =   10.33

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     63.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.871
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7793
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    1.00   SUBAREA RUNOFF(CFS) =    2.24
  TOTAL AREA(ACRES) =        5.9   TOTAL RUNOFF(CFS) =      13.21
  TC(MIN.) =   10.33

****************************************************************************
  FLOW PROCESS FROM NODE     63.00 TO NODE     64.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   963.00  DOWNSTREAM(FEET) =   938.00
  FLOW LENGTH(FEET) =    60.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   6.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  31.58
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.21
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =   10.36
  LONGEST FLOWPATH FROM NODE     60.00 TO NODE     64.00 =    1332.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     64.00 TO NODE     64.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.866
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4526
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.20   SUBAREA RUNOFF(CFS) =    0.26
  TOTAL AREA(ACRES) =        6.1   TOTAL RUNOFF(CFS) =      13.47
  TC(MIN.) =   10.36

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

```
 FLOW PROCESS FROM NODE     64.00 TO NODE     64.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.866
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7792
 SOIL CLASSIFICATION IS "D"
 SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.67
 TOTAL AREA(ACRES) =        6.4   TOTAL RUNOFF(CFS) =      14.14
 TC(MIN.) =   10.36

****************************************************************************
 FLOW PROCESS FROM NODE     64.00 TO NODE     65.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   938.00  DOWNSTREAM(FEET) =   906.30
 FLOW LENGTH(FEET) =   124.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  12.0 INCH PIPE IS   7.7 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  26.54
 ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      14.14
 PIPE TRAVEL TIME(MIN.) =   0.08    Tc(MIN.) =   10.44
 LONGEST FLOWPATH FROM NODE     60.00 TO NODE     65.00 =    1456.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     65.00 TO NODE     65.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
 >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
 TIME OF CONCENTRATION(MIN.) =   10.44
 RAINFALL INTENSITY(INCH/HR) =   2.85
 TOTAL STREAM AREA(ACRES) =     6.40
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     14.14

 ** CONFLUENCE DATA **
 STREAM     RUNOFF       Tc      INTENSITY      AREA
 NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
     1       71.45     7.74        3.335         49.30
     1       74.33     8.03        3.273         49.30
     1       74.77     8.08        3.262         49.30
     1       81.09     9.13        3.060         49.30
     1      103.63    13.48        2.500         49.30
     2       14.14    10.44        2.855          6.40

 RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
 CONFLUENCE FORMULA USED FOR  2 STREAMS.

 ** PEAK FLOW RATE TABLE **
 STREAM     RUNOFF      Tc      INTENSITY
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
     1       81.94     7.74       3.335
     2       85.20     8.03       3.273
     3       85.72     8.08       3.262
     4       93.46     9.13       3.060
     5       94.40    10.44       2.855
     6      116.01    13.48       2.500

 COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
 PEAK FLOW RATE(CFS) =     116.01   Tc(MIN.) =   13.48
 TOTAL AREA(ACRES) =       55.7
 LONGEST FLOWPATH FROM NODE     50.00 TO NODE     65.00 =    3013.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE     65.00 TO NODE     67.00 IS CODE =  31
```

```
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   906.30  DOWNSTREAM(FEET) =   903.20
  FLOW LENGTH(FEET) =   560.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  51.0 INCH PIPE IS  36.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.55
  ESTIMATED PIPE DIAMETER(INCH) =  51.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     116.01
  PIPE TRAVEL TIME(MIN.) =   0.88    Tc(MIN.) =   14.37
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     67.00 =    3573.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     67.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.418
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4144
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.50   SUBAREA RUNOFF(CFS) =    0.50
  TOTAL AREA(ACRES) =       56.2   TOTAL RUNOFF(CFS) =     116.51
  TC(MIN.) =   14.37

****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     67.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.418
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7603
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.10   SUBAREA RUNOFF(CFS) =    0.18
  TOTAL AREA(ACRES) =       56.3   TOTAL RUNOFF(CFS) =     116.69
  TC(MIN.) =   14.37

****************************************************************************
  FLOW PROCESS FROM NODE     67.00 TO NODE     76.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.20  DOWNSTREAM(FEET) =   903.00
  FLOW LENGTH(FEET) =    55.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  54.0 INCH PIPE IS  41.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.95
  ESTIMATED PIPE DIAMETER(INCH) =  54.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     116.69
  PIPE TRAVEL TIME(MIN.) =   0.10    Tc(MIN.) =   14.47
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     76.00 =    3628.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     76.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   14.47
  RAINFALL INTENSITY(INCH/HR) =   2.41
  TOTAL STREAM AREA(ACRES) =    56.30
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    116.69

****************************************************************************
  FLOW PROCESS FROM NODE     70.00 TO NODE     71.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
```

```
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   991.00
  UPSTREAM ELEVATION(FEET) =   1736.50
  DOWNSTREAM ELEVATION(FEET) =   1195.00
  ELEVATION DIFFERENCE(FEET) =    541.50
  TC = 0.533*[(  991.00**3)/(   541.50)]**.2 =    9.491
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.000
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7839
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =     20.46
  TOTAL AREA(ACRES) =      8.70   TOTAL RUNOFF(CFS) =     20.46

****************************************************************************
  FLOW PROCESS FROM NODE     71.00 TO NODE     72.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1195.00  DOWNSTREAM(FEET) =    995.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   610.00   CHANNEL SLOPE =  0.3279
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =      20.46
  FLOW VELOCITY(FEET/SEC) =   9.53 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.07   Tc(MIN.) =   10.56
  LONGEST FLOWPATH FROM NODE     70.00 TO NODE     72.00 =    1601.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     72.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.838
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7782
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    8.10   SUBAREA RUNOFF(CFS) =   17.89
  TOTAL AREA(ACRES) =       16.8   TOTAL RUNOFF(CFS) =      38.35
  TC(MIN.) =   10.56

****************************************************************************
  FLOW PROCESS FROM NODE     72.00 TO NODE     73.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    995.00  DOWNSTREAM(FEET) =    969.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   258.00   CHANNEL SLOPE =  0.1008
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =      38.35
  FLOW VELOCITY(FEET/SEC) =  11.35 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.38   Tc(MIN.) =   10.94
  LONGEST FLOWPATH FROM NODE     70.00 TO NODE     73.00 =    1859.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE     73.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.787
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4463
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.50   SUBAREA RUNOFF(CFS) =    0.62
  TOTAL AREA(ACRES) =       17.3   TOTAL RUNOFF(CFS) =      38.97
  TC(MIN.) =   10.94

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE     73.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.787
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7762
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =   13.50   SUBAREA RUNOFF(CFS) =   29.20
  TOTAL AREA(ACRES) =       30.8   TOTAL RUNOFF(CFS) =      68.18
  TC(MIN.) =   10.94

****************************************************************************
  FLOW PROCESS FROM NODE     73.00 TO NODE     74.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    969.00  DOWNSTREAM(FEET) =    963.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   197.00   CHANNEL SLOPE =  0.0305
  CHANNEL FLOW THRU SUBAREA(CFS) =      68.18
  FLOW VELOCITY(FEET/SEC) =   7.39 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.44   Tc(MIN.) =   11.38
  LONGEST FLOWPATH FROM NODE     70.00 TO NODE     74.00 =    2056.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     74.00 TO NODE     74.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.730
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7740
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =   11.20   SUBAREA RUNOFF(CFS) =   23.66
  TOTAL AREA(ACRES) =       42.0   TOTAL RUNOFF(CFS) =      91.84
  TC(MIN.) =   11.38

****************************************************************************
  FLOW PROCESS FROM NODE     74.00 TO NODE     75.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   955.70  DOWNSTREAM(FEET) =   931.20
  FLOW LENGTH(FEET) =    61.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  15.1 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  49.65
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      91.84
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =   11.40
  LONGEST FLOWPATH FROM NODE     70.00 TO NODE     75.00 =    2117.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     75.00 TO NODE     75.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.727
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4414
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.50   SUBAREA RUNOFF(CFS) =    0.60
  TOTAL AREA(ACRES) =       42.5   TOTAL RUNOFF(CFS) =      92.44
  TC(MIN.) =   11.40

****************************************************************************
  FLOW PROCESS FROM NODE     75.00 TO NODE     75.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.727
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7739
  SOIL CLASSIFICATION IS "D"
```

```
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.63
  TOTAL AREA(ACRES) =       42.8   TOTAL RUNOFF(CFS) =      93.07
  TC(MIN.) =   11.40

****************************************************************************
  FLOW PROCESS FROM NODE     75.00 TO NODE     76.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   931.20  DOWNSTREAM(FEET) =   904.30
  FLOW LENGTH(FEET) =    94.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  44.39
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      93.07
  PIPE TRAVEL TIME(MIN.) =   0.04    Tc(MIN.) =   11.44
  LONGEST FLOWPATH FROM NODE     70.00 TO NODE     76.00 =    2211.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     76.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.44
  RAINFALL INTENSITY(INCH/HR) =   2.72
  TOTAL STREAM AREA(ACRES) =    42.80
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     93.07

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       82.93     8.82        3.117         56.30
      1       86.17     9.10        3.067         56.30
      1       86.68     9.15        3.058         56.30
      1       94.35    10.19        2.891         56.30
      1       95.21    11.50        2.715         56.30
      1      116.69    14.47        2.409         56.30
      2       93.07    11.44        2.723         42.80

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1      154.69     8.82       3.117
      2      160.19     9.10       3.067
      3      161.14     9.15       3.058
      4      177.30    10.19       2.891
      5      187.77    11.44       2.723
      6      188.02    11.50       2.715
      7      199.05    14.47       2.409

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     199.05   Tc(MIN.) =   14.47
  TOTAL AREA(ACRES) =       99.1
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     76.00 =    3628.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     76.00 TO NODE     83.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.00  DOWNSTREAM(FEET) =   902.20
```

```
  FLOW LENGTH(FEET) =   230.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  66.0 INCH PIPE IS  51.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  10.02
  ESTIMATED PIPE DIAMETER(INCH) =  66.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     199.05
  PIPE TRAVEL TIME(MIN.) =   0.38    Tc(MIN.) =   14.85
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     83.00 =    3858.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     83.00 TO NODE     83.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   14.85
  RAINFALL INTENSITY(INCH/HR) =   2.38
  TOTAL STREAM AREA(ACRES) =    99.10
  PEAK FLOW RATE(CFS) AT CONFLUENCE =    199.05

****************************************************************************
  FLOW PROCESS FROM NODE     80.00 TO NODE     81.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   318.00
  UPSTREAM ELEVATION(FEET) =   1035.00
  DOWNSTREAM ELEVATION(FEET) =    953.00
  ELEVATION DIFFERENCE(FEET) =     82.00
  TC = 0.533*[(  318.00**3)/(    82.00)]**.2 =    7.000
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.515
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7990
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      0.84
  TOTAL AREA(ACRES) =      0.30   TOTAL RUNOFF(CFS) =      0.84

****************************************************************************
  FLOW PROCESS FROM NODE     81.00 TO NODE     82.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   948.00  DOWNSTREAM(FEET) =   925.70
  FLOW LENGTH(FEET) =    57.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   1.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  14.11
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       0.84
  PIPE TRAVEL TIME(MIN.) =   0.07    Tc(MIN.) =    7.07
  LONGEST FLOWPATH FROM NODE     80.00 TO NODE     82.00 =     375.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     82.00 TO NODE     82.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.497
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4972
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.10   SUBAREA RUNOFF(CFS) =    0.17
  TOTAL AREA(ACRES) =        0.4   TOTAL RUNOFF(CFS) =       1.02
  TC(MIN.) =    7.07

****************************************************************************
  FLOW PROCESS FROM NODE     82.00 TO NODE     82.00 IS CODE =  81
```

```
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.497
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7985
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.10   SUBAREA RUNOFF(CFS) =    0.28
  TOTAL AREA(ACRES) =        0.5   TOTAL RUNOFF(CFS) =       1.30
  TC(MIN.) =    7.07

****************************************************************************
  FLOW PROCESS FROM NODE     82.00 TO NODE     83.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   925.70  DOWNSTREAM(FEET) =   903.90
  FLOW LENGTH(FEET) =    59.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   1.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  15.76
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.30
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =    7.13
  LONGEST FLOWPATH FROM NODE     80.00 TO NODE     83.00 =     434.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     83.00 TO NODE     83.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.481
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4962
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.52
  TOTAL AREA(ACRES) =        0.8   TOTAL RUNOFF(CFS) =       1.81
  TC(MIN.) =    7.13

****************************************************************************
  FLOW PROCESS FROM NODE     83.00 TO NODE     83.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.481
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7981
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.20   SUBAREA RUNOFF(CFS) =    0.56
  TOTAL AREA(ACRES) =        1.0   TOTAL RUNOFF(CFS) =       2.37
  TC(MIN.) =    7.13

****************************************************************************
  FLOW PROCESS FROM NODE     83.00 TO NODE     83.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    7.13
  RAINFALL INTENSITY(INCH/HR) =   3.48
  TOTAL STREAM AREA(ACRES) =     1.00
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.37

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1      154.69     9.23        3.045         99.10
      1      160.19     9.50        2.998         99.10
      1      161.14     9.56        2.989         99.10
```

```
     1      177.30    10.59        2.834         99.10
     1      187.77    11.82        2.676         99.10
     1      188.02    11.88        2.669         99.10
     1      199.05    14.85        2.377         99.10
     2        2.37     7.13        3.481          1.00

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1      122.59     7.13       3.481
      2      156.76     9.23       3.045
      3      162.23     9.50       2.998
      4      163.17     9.56       2.989
      5      179.23    10.59       2.834
      6      189.59    11.82       2.676
      7      189.84    11.88       2.669
      8      200.67    14.85       2.377

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     200.67   Tc(MIN.) =   14.85
  TOTAL AREA(ACRES) =      100.1
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE     83.00 =    3858.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE     83.00 TO NODE    249.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   902.20  DOWNSTREAM(FEET) =   870.00
  FLOW LENGTH(FEET) =   880.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  42.0 INCH PIPE IS  33.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  24.09
  ESTIMATED PIPE DIAMETER(INCH) =  42.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     200.67
  PIPE TRAVEL TIME(MIN.) =   0.61    Tc(MIN.) =   15.46
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE    249.00 =    4738.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    259.00 TO NODE    259.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 3 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    200.00 TO NODE    201.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   800.00
  UPSTREAM ELEVATION(FEET) =    927.00
  DOWNSTREAM ELEVATION(FEET) =    918.00
  ELEVATION DIFFERENCE(FEET) =      9.00
  TC = 0.303*[(  800.00**3)/(     9.00)]**.2 =   10.779
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.808
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8548
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =     12.58
  TOTAL AREA(ACRES) =      5.24   TOTAL RUNOFF(CFS) =     12.58

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    201.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.808
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8877
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.40   SUBAREA RUNOFF(CFS) =    1.00
  TOTAL AREA(ACRES) =        5.6   TOTAL RUNOFF(CFS) =      13.57
  TC(MIN.) =   10.78

****************************************************************************
  FLOW PROCESS FROM NODE    201.00 TO NODE    202.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   914.00  DOWNSTREAM(FEET) =   911.85
  FLOW LENGTH(FEET) =   430.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  16.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.98
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.57
  PIPE TRAVEL TIME(MIN.) =   1.20    Tc(MIN.) =   11.98
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    202.00 =    1230.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    202.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.658
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8536
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.60   SUBAREA RUNOFF(CFS) =    1.36
  TOTAL AREA(ACRES) =        6.2   TOTAL RUNOFF(CFS) =      14.94
  TC(MIN.) =   11.98

****************************************************************************
  FLOW PROCESS FROM NODE    202.00 TO NODE    212.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   911.85  DOWNSTREAM(FEET) =   911.00
  FLOW LENGTH(FEET) =   170.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  17.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.07
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      14.94
  PIPE TRAVEL TIME(MIN.) =   0.47    Tc(MIN.) =   12.44
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    212.00 =    1400.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    212.00 TO NODE    212.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   12.44
  RAINFALL INTENSITY(INCH/HR) =   2.61
  TOTAL STREAM AREA(ACRES) =     6.24
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     14.94

****************************************************************************
  FLOW PROCESS FROM NODE    210.00 TO NODE    211.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
================================================================================
          ASSUMED INITIAL SUBAREA UNIFORM
```

```
       DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   300.00
  UPSTREAM ELEVATION(FEET) =    915.60
  DOWNSTREAM ELEVATION(FEET) =    913.90
  ELEVATION DIFFERENCE(FEET) =      1.70
  TC = 0.303*[(  300.00**3)/(     1.70)]**.2 =    8.352
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.206
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8578
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      6.82
  TOTAL AREA(ACRES) =      2.48   TOTAL RUNOFF(CFS) =      6.82

****************************************************************************
  FLOW PROCESS FROM NODE    211.00 TO NODE    211.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.206
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8890
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.20   SUBAREA RUNOFF(CFS) =    0.57
  TOTAL AREA(ACRES) =        2.7   TOTAL RUNOFF(CFS) =       7.39
  TC(MIN.) =    8.35

****************************************************************************
  FLOW PROCESS FROM NODE    211.00 TO NODE    212.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   909.90  DOWNSTREAM(FEET) =   908.10
  FLOW LENGTH(FEET) =   360.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  13.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.05
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       7.39
  PIPE TRAVEL TIME(MIN.) =   1.19    Tc(MIN.) =    9.54
  LONGEST FLOWPATH FROM NODE    210.00 TO NODE    212.00 =     660.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    212.00 TO NODE    212.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    9.54
  RAINFALL INTENSITY(INCH/HR) =   2.99
  TOTAL STREAM AREA(ACRES) =     2.68
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      7.39

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       14.94    12.44        2.606          6.24
      2        7.39     9.54        2.992          2.68

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       18.84     9.54       2.992
      2       21.37    12.44       2.606

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
```

```
  PEAK FLOW RATE(CFS) =      21.37   Tc(MIN.) =   12.44
  TOTAL AREA(ACRES) =        8.9
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    212.00 =    1400.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    212.00 TO NODE    222.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   908.10  DOWNSTREAM(FEET) =   905.00
  FLOW LENGTH(FEET) =   235.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   9.66
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      21.37
  PIPE TRAVEL TIME(MIN.) =   0.41    Tc(MIN.) =   12.85
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    222.00 =    1635.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   12.85
  RAINFALL INTENSITY(INCH/HR) =   2.56
  TOTAL STREAM AREA(ACRES) =     8.92
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     21.37

****************************************************************************
  FLOW PROCESS FROM NODE    220.00 TO NODE    221.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   460.00
  UPSTREAM ELEVATION(FEET) =    920.50
  DOWNSTREAM ELEVATION(FEET) =    912.00
  ELEVATION DIFFERENCE(FEET) =      8.50
  TC = 0.303*[(  460.00**3)/(     8.50)]**.2 =    7.823
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.317
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8894
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      1.92
  TOTAL AREA(ACRES) =      0.65   TOTAL RUNOFF(CFS) =      1.92

****************************************************************************
  FLOW PROCESS FROM NODE    221.00 TO NODE    221.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.317
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8585
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.37   SUBAREA RUNOFF(CFS) =    1.05
  TOTAL AREA(ACRES) =        1.0   TOTAL RUNOFF(CFS) =       2.97
  TC(MIN.) =    7.82

****************************************************************************
  FLOW PROCESS FROM NODE    221.00 TO NODE    222.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   908.00  DOWNSTREAM(FEET) =   905.00
```

```
  FLOW LENGTH(FEET) =   200.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   7.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.23
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       2.97
  PIPE TRAVEL TIME(MIN.) =   0.53    Tc(MIN.) =    8.36
  LONGEST FLOWPATH FROM NODE    220.00 TO NODE    222.00 =     660.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    222.00 TO NODE    222.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.36
  RAINFALL INTENSITY(INCH/HR) =   3.21
  TOTAL STREAM AREA(ACRES) =     1.02
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      2.97

  ** CONFLUENCE DATA **
  STREAM     RUNOFF        Tc       INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       18.84     9.97        2.924          8.92
      1       21.37    12.85        2.563          8.92
      2        2.97     8.36        3.205          1.02

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF       Tc       INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       18.77     8.36       3.205
      2       21.55     9.97       2.924
      3       23.75    12.85       2.563

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      23.75   Tc(MIN.) =   12.85
  TOTAL AREA(ACRES) =        9.9
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    222.00 =    1635.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    222.00 TO NODE    223.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   905.00  DOWNSTREAM(FEET) =   902.30
  FLOW LENGTH(FEET) =   540.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  19.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.89
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      23.75
  PIPE TRAVEL TIME(MIN.) =   1.31    Tc(MIN.) =   14.16
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    223.00 =    2175.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    223.00 TO NODE    223.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.437
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8516
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    2.14   SUBAREA RUNOFF(CFS) =    4.44
  TOTAL AREA(ACRES) =       12.1   TOTAL RUNOFF(CFS) =      28.19
  TC(MIN.) =   14.16
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    223.00 TO NODE    224.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   902.30  DOWNSTREAM(FEET) =   901.70
  FLOW LENGTH(FEET) =   124.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  23.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.98
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      28.19
  PIPE TRAVEL TIME(MIN.) =   0.30    Tc(MIN.) =   14.45
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    224.00 =    2299.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    224.00 TO NODE    224.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.411
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8514
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.89   SUBAREA RUNOFF(CFS) =    1.83
  TOTAL AREA(ACRES) =       13.0   TOTAL RUNOFF(CFS) =      30.02
  TC(MIN.) =   14.45

****************************************************************************
  FLOW PROCESS FROM NODE    224.00 TO NODE    225.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   901.70  DOWNSTREAM(FEET) =   901.10
  FLOW LENGTH(FEET) =   124.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  24.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.00
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      30.02
  PIPE TRAVEL TIME(MIN.) =   0.30    Tc(MIN.) =   14.75
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    225.00 =    2423.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    225.00 TO NODE    225.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.386
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8511
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.73   SUBAREA RUNOFF(CFS) =    1.48
  TOTAL AREA(ACRES) =       13.7   TOTAL RUNOFF(CFS) =      31.50
  TC(MIN.) =   14.75

****************************************************************************
  FLOW PROCESS FROM NODE    225.00 TO NODE    225.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.386
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8819
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.20   SUBAREA RUNOFF(CFS) =    0.42
  TOTAL AREA(ACRES) =       13.9   TOTAL RUNOFF(CFS) =      31.92
  TC(MIN.) =   14.75

****************************************************************************
  FLOW PROCESS FROM NODE    225.00 TO NODE    226.00 IS CODE =  31
```

```
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   901.10  DOWNSTREAM(FEET) =   900.50
  FLOW LENGTH(FEET) =   124.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  22.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.30
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      31.92
  PIPE TRAVEL TIME(MIN.) =   0.28    Tc(MIN.) =   15.03
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    226.00 =    2547.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    226.00 TO NODE    226.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.362
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8509
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.80   SUBAREA RUNOFF(CFS) =    1.61
  TOTAL AREA(ACRES) =       14.7   TOTAL RUNOFF(CFS) =      33.53
  TC(MIN.) =   15.03

****************************************************************************
  FLOW PROCESS FROM NODE    226.00 TO NODE    226.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.362
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8818
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.28   SUBAREA RUNOFF(CFS) =    2.67
  TOTAL AREA(ACRES) =       16.0   TOTAL RUNOFF(CFS) =      36.19
  TC(MIN.) =   15.03

****************************************************************************
  FLOW PROCESS FROM NODE    226.00 TO NODE    234.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   900.50  DOWNSTREAM(FEET) =   899.20
  FLOW LENGTH(FEET) =   260.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  24.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.54
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      36.19
  PIPE TRAVEL TIME(MIN.) =   0.57    Tc(MIN.) =   15.60
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    234.00 =    2807.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    234.00 TO NODE    234.00 IS CODE =   1
------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
========================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   15.60
  RAINFALL INTENSITY(INCH/HR) =   2.32
  TOTAL STREAM AREA(ACRES) =    15.98
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     36.19

****************************************************************************
  FLOW PROCESS FROM NODE    230.00 TO NODE    231.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
```

```
        ASSUMED INITIAL SUBAREA UNIFORM
        DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   627.00
  UPSTREAM ELEVATION(FEET) =    918.00
  DOWNSTREAM ELEVATION(FEET) =    909.00
  ELEVATION DIFFERENCE(FEET) =      9.00
  TC = 0.303*[(  627.00**3)/(     9.00)]**.2 =    9.313
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.030
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8885
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      6.51
  TOTAL AREA(ACRES) =      2.42   TOTAL RUNOFF(CFS) =      6.51

****************************************************************************
  FLOW PROCESS FROM NODE    231.00 TO NODE    231.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.030
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8565
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.71   SUBAREA RUNOFF(CFS) =    1.84
  TOTAL AREA(ACRES) =        3.1   TOTAL RUNOFF(CFS) =       8.36
  TC(MIN.) =    9.31

****************************************************************************
  FLOW PROCESS FROM NODE    231.00 TO NODE    232.00 IS CODE =  91
----------------------------------------------------------------------------
  >>>>>COMPUTE "V" GUTTER FLOW TRAVEL TIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION(FEET) =    909.00
  DOWNSTREAM NODE ELEVATION(FEET) =    906.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   298.00
  "V" GUTTER WIDTH(FEET) =   3.00   GUTTER HIKE(FEET) =  0.500
  PAVEMENT LIP(FEET) =  0.050   MANNING'S N = .0150
  PAVEMENT CROSSFALL(DECIMAL NOTATION) = 0.02000
  MAXIMUM DEPTH(FEET) =   0.75
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.829
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8878
  SOIL CLASSIFICATION IS "D"
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =     10.05
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   3.77
  AVERAGE FLOW DEPTH(FEET) =   0.71   FLOOD WIDTH(FEET) =   19.02
  "V" GUTTER FLOW TRAVEL TIME(MIN.) =   1.32   Tc(MIN.) =   10.63
  SUBAREA AREA(ACRES) =    1.35       SUBAREA RUNOFF(CFS) =    3.39
  TOTAL AREA(ACRES) =        4.5         PEAK FLOW RATE(CFS) =      11.75

  END OF SUBAREA "V" GUTTER HYDRAULICS:
  DEPTH(FEET) =  0.73   FLOOD WIDTH(FEET) =   21.20
  FLOW VELOCITY(FEET/SEC.) =   3.79   DEPTH*VELOCITY(FT*FT/SEC) =   2.77
  LONGEST FLOWPATH FROM NODE    230.00 TO NODE    232.00 =     925.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    232.00 TO NODE    232.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.829
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8550
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.46   SUBAREA RUNOFF(CFS) =    1.11
  TOTAL AREA(ACRES) =        4.9   TOTAL RUNOFF(CFS) =      12.86
  TC(MIN.) =   10.63

****************************************************************************
  FLOW PROCESS FROM NODE    232.00 TO NODE    233.00 IS CODE =  61
----------------------------------------------------------------------------
  >>>>>COMPUTE STREET FLOW TRAVEL TIME THRU SUBAREA<<<<<
```

```
  >>>>>(STANDARD CURB SECTION USED)<<<<<
============================================================================
  UPSTREAM ELEVATION(FEET) =  906.00  DOWNSTREAM ELEVATION(FEET) =  904.30
  STREET LENGTH(FEET) =   375.00   CURB HEIGHT(INCHES) =  8.0
  STREET HALFWIDTH(FEET) = 35.00

  DISTANCE FROM CROWN TO CROSSFALL GRADEBREAK(FEET) =  30.00
  INSIDE STREET CROSSFALL(DECIMAL) =  0.500
  OUTSIDE STREET CROSSFALL(DECIMAL)  =  0.500

  SPECIFIED NUMBER OF HALFSTREETS CARRYING RUNOFF =  1
  STREET PARKWAY CROSSFALL(DECIMAL)  =  0.021
  Manning's FRICTION FACTOR for Streetflow Section(curb-to-curb) =   0.0150
  Manning's FRICTION FACTOR for Back-of-Walk Flow Section =   0.0200

    **TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      13.19
    STREETFLOW MODEL RESULTS USING ESTIMATED FLOW:
    STREET FLOW DEPTH(FEET) =  0.96
    HALFSTREET FLOOD WIDTH(FEET) =   17.65
    AVERAGE FLOW VELOCITY(FEET/SEC.) =    2.97
    PRODUCT OF DEPTH&VELOCITY(FT*FT/SEC.) =    2.86
  STREET FLOW TRAVEL TIME(MIN.) =   2.10   Tc(MIN.) =   12.73
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.575
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8529
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30      SUBAREA RUNOFF(CFS) =    0.66
  TOTAL AREA(ACRES) =        5.2        PEAK FLOW RATE(CFS) =      13.52

  END OF SUBAREA STREET FLOW HYDRAULICS:
  DEPTH(FEET) = 0.97   HALFSTREET FLOOD WIDTH(FEET) =  18.00
  FLOW VELOCITY(FEET/SEC.) =  2.96   DEPTH*VELOCITY(FT*FT/SEC.) =   2.87
  LONGEST FLOWPATH FROM NODE    230.00 TO NODE    233.00 =    1300.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    233.00 TO NODE    233.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.575
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8868
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.14   SUBAREA RUNOFF(CFS) =    0.32
  TOTAL AREA(ACRES) =        5.4   TOTAL RUNOFF(CFS) =      13.84
  TC(MIN.) =   12.73

****************************************************************************
  FLOW PROCESS FROM NODE    233.00 TO NODE    234.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   900.00  DOWNSTREAM(FEET) =   899.50
  FLOW LENGTH(FEET) =    10.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  11.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  14.08
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.84
  PIPE TRAVEL TIME(MIN.) =   0.01    Tc(MIN.) =   12.74
  LONGEST FLOWPATH FROM NODE    230.00 TO NODE    234.00 =    1310.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    234.00 TO NODE    234.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   12.74
```

```
  RAINFALL INTENSITY(INCH/HR) =   2.57
  TOTAL STREAM AREA(ACRES) =     5.38
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.84

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       33.83    11.22        2.750         15.98
      1       35.51    12.79        2.570         15.98
      1       36.19    15.60        2.317         15.98
      2       13.84    12.74        2.574          5.38

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       46.02    11.22       2.750
      2       49.23    12.74       2.574
      3       49.32    12.79       2.570
      4       48.65    15.60       2.317

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      49.32   Tc(MIN.) =   12.79
  TOTAL AREA(ACRES) =       21.4
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    234.00 =    2807.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    234.00 TO NODE    235.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   899.50  DOWNSTREAM(FEET) =   879.75
  FLOW LENGTH(FEET) =   100.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  12.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  33.07
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      49.32
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =   12.84
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    235.00 =    2907.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    235.00 TO NODE    235.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.564
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4276
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    1.30   SUBAREA RUNOFF(CFS) =    1.43
  TOTAL AREA(ACRES) =       22.7   TOTAL RUNOFF(CFS) =      50.75
  TC(MIN.) =   12.84

****************************************************************************
  FLOW PROCESS FROM NODE    235.00 TO NODE    235.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.564
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7671
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    0.33   SUBAREA RUNOFF(CFS) =    0.65
  TOTAL AREA(ACRES) =       23.0   TOTAL RUNOFF(CFS) =      51.40
  TC(MIN.) =   12.84

****************************************************************************
  FLOW PROCESS FROM NODE    235.00 TO NODE    235.00 IS CODE =  81
```

```
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.564
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7296
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.90   SUBAREA RUNOFF(CFS) =    1.68
  TOTAL AREA(ACRES) =       23.9   TOTAL RUNOFF(CFS) =      53.08
  TC(MIN.) =   12.84

************************************************************************
  FLOW PROCESS FROM NODE    236.00 TO NODE    258.00 IS CODE =  31
------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   879.21  DOWNSTREAM(FEET) =   875.99
  FLOW LENGTH(FEET) =   604.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  39.0 INCH PIPE IS  27.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.59
  ESTIMATED PIPE DIAMETER(INCH) =  39.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      53.08
  PIPE TRAVEL TIME(MIN.) =   1.17    Tc(MIN.) =   14.01
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    258.00 =    3511.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    258.00 TO NODE    258.00 IS CODE =  10
------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
========================================================================

************************************************************************
  FLOW PROCESS FROM NODE    240.00 TO NODE    241.00 IS CODE =  21
------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH FAIR COVER
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   992.00
  UPSTREAM ELEVATION(FEET) =   1460.00
  DOWNSTREAM ELEVATION(FEET) =   1045.00
  ELEVATION DIFFERENCE(FEET) =    415.00
  TC = 0.709*[(  992.00**3)/(   415.00)]**.2 =   13.341
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.513
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7648
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      2.11
  TOTAL AREA(ACRES) =      1.10   TOTAL RUNOFF(CFS) =      2.11

************************************************************************
  FLOW PROCESS FROM NODE    241.00 TO NODE    242.00 IS CODE =  52
------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1045.00  DOWNSTREAM(FEET) =    975.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   465.00   CHANNEL SLOPE =  0.1505
  NOTE: CHANNEL SLOPE OF .1 WAS ASSUMED IN VELOCITY ESTIMATION
  CHANNEL FLOW THRU SUBAREA(CFS) =       2.11
  FLOW VELOCITY(FEET/SEC) =   5.51 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.41   Tc(MIN.) =   14.75
  LONGEST FLOWPATH FROM NODE    240.00 TO NODE    242.00 =    1457.00 FEET.

************************************************************************
  FLOW PROCESS FROM NODE    242.00 TO NODE    242.00 IS CODE =  81
------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
========================================================================
```

```
 100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.386
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7587
 SOIL CLASSIFICATION IS "D"
 SUBAREA AREA(ACRES) =    4.30   SUBAREA RUNOFF(CFS) =    7.78
 TOTAL AREA(ACRES) =        5.4   TOTAL RUNOFF(CFS) =       9.90
 TC(MIN.) =   14.75

****************************************************************************
 FLOW PROCESS FROM NODE    242.00 TO NODE    243.00 IS CODE =  52
----------------------------------------------------------------------------
 >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
 >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =    975.00  DOWNSTREAM(FEET) =    933.40
 CHANNEL LENGTH THRU SUBAREA(FEET) =   717.00   CHANNEL SLOPE =  0.0580
 CHANNEL FLOW THRU SUBAREA(CFS) =       9.90
 FLOW VELOCITY(FEET/SEC) =   6.00 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
 TRAVEL TIME(MIN.) =   1.99   Tc(MIN.) =   16.74
 LONGEST FLOWPATH FROM NODE    240.00 TO NODE    243.00 =    2174.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    243.00 TO NODE    243.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.234
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7506
 SOIL CLASSIFICATION IS "D"
 SUBAREA AREA(ACRES) =    7.50   SUBAREA RUNOFF(CFS) =   12.57
 TOTAL AREA(ACRES) =       12.9   TOTAL RUNOFF(CFS) =      22.47
 TC(MIN.) =   16.74

****************************************************************************
 FLOW PROCESS FROM NODE    243.00 TO NODE    254.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   929.40  DOWNSTREAM(FEET) =   928.00
 FLOW LENGTH(FEET) =    10.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  15.0 INCH PIPE IS  10.9 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  23.48
 ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      22.47
 PIPE TRAVEL TIME(MIN.) =   0.01    Tc(MIN.) =   16.75
 LONGEST FLOWPATH FROM NODE    240.00 TO NODE    254.00 =    2184.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    254.00 TO NODE    254.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
 TOTAL NUMBER OF STREAMS =  2
 CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
 TIME OF CONCENTRATION(MIN.) =   16.75
 RAINFALL INTENSITY(INCH/HR) =   2.23
 TOTAL STREAM AREA(ACRES) =    12.90
 PEAK FLOW RATE(CFS) AT CONFLUENCE =     22.47

****************************************************************************
 FLOW PROCESS FROM NODE    250.00 TO NODE    251.00 IS CODE =  21
----------------------------------------------------------------------------
 >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS: UNDEVELOPED WITH POOR COVER
 TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
 INITIAL SUBAREA FLOW-LENGTH(FEET) =  1000.00
 UPSTREAM ELEVATION(FEET) =   1450.00
```

```
  DOWNSTREAM ELEVATION(FEET) =   1035.00
  ELEVATION DIFFERENCE(FEET) =    415.00
  TC = 0.533*[( 1000.00**3)/(   415.00)]**.2 =   10.064
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.910
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7808
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =     10.68
  TOTAL AREA(ACRES) =      4.70   TOTAL RUNOFF(CFS) =     10.68

****************************************************************************
  FLOW PROCESS FROM NODE    251.00 TO NODE    252.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   1035.00  DOWNSTREAM(FEET) =    955.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   850.00   CHANNEL SLOPE =  0.0941
  CHANNEL FLOW THRU SUBAREA(CFS) =      10.68
  FLOW VELOCITY(FEET/SEC) =   7.80 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   1.82   Tc(MIN.) =   11.88
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    252.00 =    1850.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    252.00 TO NODE    252.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.669
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7715
  SOIL CLASSIFICATION IS "D"
  SUBAREA AREA(ACRES) =    1.50   SUBAREA RUNOFF(CFS) =    3.09
  TOTAL AREA(ACRES) =        6.2   TOTAL RUNOFF(CFS) =      13.77
  TC(MIN.) =   11.88

****************************************************************************
  FLOW PROCESS FROM NODE    252.00 TO NODE    252.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.669
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .4366
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    4.20   SUBAREA RUNOFF(CFS) =    4.89
  TOTAL AREA(ACRES) =       10.4   TOTAL RUNOFF(CFS) =      18.66
  TC(MIN.) =   11.88

****************************************************************************
  FLOW PROCESS FROM NODE    252.00 TO NODE    252.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.669
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7350
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.30   SUBAREA RUNOFF(CFS) =    2.55
  TOTAL AREA(ACRES) =       11.7   TOTAL RUNOFF(CFS) =      21.21
  TC(MIN.) =   11.88

****************************************************************************
  FLOW PROCESS FROM NODE    252.00 TO NODE    253.00 IS CODE =  52
----------------------------------------------------------------------------
  >>>>>COMPUTE NATURAL VALLEY CHANNEL FLOW<<<<<
  >>>>>TRAVELTIME THRU SUBAREA<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =    955.00  DOWNSTREAM(FEET) =    938.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   375.00   CHANNEL SLOPE =  0.0453
  CHANNEL FLOW THRU SUBAREA(CFS) =      21.21
  FLOW VELOCITY(FEET/SEC) =   6.48 (PER LACFCD/RCFC&WCD HYDROLOGY MANUAL)
  TRAVEL TIME(MIN.) =   0.96   Tc(MIN.) =   12.85
```

```
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    253.00 =    2225.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    253.00 TO NODE    253.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.563
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7295
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.30   SUBAREA RUNOFF(CFS) =    4.30
  TOTAL AREA(ACRES) =       14.0   TOTAL RUNOFF(CFS) =      25.51
  TC(MIN.) =   12.85

****************************************************************************
  FLOW PROCESS FROM NODE    253.00 TO NODE    254.00 IS CODE =  91
----------------------------------------------------------------------------
  >>>>>COMPUTE "V" GUTTER FLOW TRAVEL TIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION(FEET) =    938.00
  DOWNSTREAM NODE ELEVATION(FEET) =    933.00
  CHANNEL LENGTH THRU SUBAREA(FEET) =   230.00
  "V" GUTTER WIDTH(FEET) =   1.50   GUTTER HIKE(FEET) =  0.200
  PAVEMENT LIP(FEET) =  0.050   MANNING'S N = .0150
  PAVEMENT CROSSFALL(DECIMAL NOTATION) = 0.08000
  MAXIMUM DEPTH(FEET) =   0.50
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.543
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8828
  SOIL CLASSIFICATION IS "C"
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =     26.41
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =  19.12
  AVERAGE FLOW DEPTH(FEET) =   0.50   FLOOD WIDTH(FEET) =    7.75
  "V" GUTTER FLOW TRAVEL TIME(MIN.) =   0.20   Tc(MIN.) =   13.05
  SUBAREA AREA(ACRES) =    0.80       SUBAREA RUNOFF(CFS) =    1.80
  TOTAL AREA(ACRES) =       14.8         PEAK FLOW RATE(CFS) =      27.31

         ==>>ERROR:FLOW EXCEEDS CAPACITY OF CHANNEL WITH
             NORMAL DEPTH EQUAL TO SPECIFIED MAXIMUM ALLOWABLE DEPTH.
             AS AN APPROXIMATION, TRAVEL TIME CALCULATIONS ARE BASED
             ON FLOW DEPTH EQUAL TO THE SPECIFIED MAXIMUM ALLOWABLE DEPTH.


  END OF SUBAREA "V" GUTTER HYDRAULICS:
  DEPTH(FEET) =  0.50   FLOOD WIDTH(FEET) =    7.75
  FLOW VELOCITY(FEET/SEC.) =  19.77   DEPTH*VELOCITY(FT*FT/SEC) =   9.89
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    254.00 =    2455.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    254.00 TO NODE    254.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   13.05
  RAINFALL INTENSITY(INCH/HR) =   2.54
  TOTAL STREAM AREA(ACRES) =    14.80
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     27.31

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       22.47    16.75        2.233         12.90
      2       27.31    13.05        2.543         14.80

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.
```

```
  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       44.82    13.05       2.543
      2       46.46    16.75       2.233

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      46.46   Tc(MIN.) =   16.75
  TOTAL AREA(ACRES) =       27.7
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    254.00 =    2455.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    254.00 TO NODE    255.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   928.00  DOWNSTREAM(FEET) =   927.00
  FLOW LENGTH(FEET) =    15.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  21.57
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      46.46
  PIPE TRAVEL TIME(MIN.) =   0.01    Tc(MIN.) =   16.76
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    255.00 =    2470.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    255.00 TO NODE    256.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   927.00  DOWNSTREAM(FEET) =   926.00
  FLOW LENGTH(FEET) =   220.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  36.0 INCH PIPE IS  28.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.66
  ESTIMATED PIPE DIAMETER(INCH) =  36.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      46.46
  PIPE TRAVEL TIME(MIN.) =   0.48    Tc(MIN.) =   17.24
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    256.00 =    2690.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    256.00 TO NODE    256.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.200
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8493
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    2.16   SUBAREA RUNOFF(CFS) =    4.04
  TOTAL AREA(ACRES) =       29.9   TOTAL RUNOFF(CFS) =      50.49
  TC(MIN.) =   17.24

****************************************************************************
  FLOW PROCESS FROM NODE    256.00 TO NODE    257.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   924.00  DOWNSTREAM(FEET) =   879.60
  FLOW LENGTH(FEET) =  1110.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  17.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  18.16
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      50.49
  PIPE TRAVEL TIME(MIN.) =   1.02    Tc(MIN.) =   18.25
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    257.00 =    3800.00 FEET.

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

```
 FLOW PROCESS FROM NODE    257.00 TO NODE    257.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.135
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8845
 SOIL CLASSIFICATION IS "D"
 SUBAREA AREA(ACRES) =    0.65   SUBAREA RUNOFF(CFS) =    1.23
 TOTAL AREA(ACRES) =       30.5   TOTAL RUNOFF(CFS) =      51.72
 TC(MIN.) =   18.25

****************************************************************************
 FLOW PROCESS FROM NODE    257.00 TO NODE    257.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.135
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8487
 SOIL CLASSIFICATION IS "A"
 SUBAREA AREA(ACRES) =    1.63   SUBAREA RUNOFF(CFS) =    2.95
 TOTAL AREA(ACRES) =       32.1   TOTAL RUNOFF(CFS) =      54.67
 TC(MIN.) =   18.25

****************************************************************************
 FLOW PROCESS FROM NODE    257.00 TO NODE    257.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.135
 UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .3868
 SOIL CLASSIFICATION IS "A"
 SUBAREA AREA(ACRES) =    1.06   SUBAREA RUNOFF(CFS) =    0.88
 TOTAL AREA(ACRES) =       33.2   TOTAL RUNOFF(CFS) =      55.55
 TC(MIN.) =   18.25

****************************************************************************
 FLOW PROCESS FROM NODE    257.00 TO NODE    258.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   879.60  DOWNSTREAM(FEET) =   875.99
 FLOW LENGTH(FEET) =   100.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  27.0 INCH PIPE IS  19.9 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  17.68
 ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      55.55
 PIPE TRAVEL TIME(MIN.) =   0.09    Tc(MIN.) =   18.35
 LONGEST FLOWPATH FROM NODE    250.00 TO NODE    258.00 =    3900.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    258.00 TO NODE    258.00 IS CODE =  11
----------------------------------------------------------------------------
 >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

 ** MAIN STREAM CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY     AREA
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
     1       55.17    14.65       2.393       33.20
     2       55.55    18.35       2.129       33.20
 LONGEST FLOWPATH FROM NODE    250.00 TO NODE    258.00 =    3900.00 FEET.

 ** MEMORY BANK #  1 CONFLUENCE DATA **
 STREAM     RUNOFF      Tc      INTENSITY     AREA
 NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
     1       50.12    12.49       2.601       23.89
     2       53.00    13.97       2.454       23.89
     3       53.08    14.01       2.450       23.89
```

```
    4       51.93    16.83       2.227       23.89
  LONGEST FLOWPATH FROM NODE    200.00 TO NODE    258.00 =    3511.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1      97.14      12.49        2.601
      2     105.58      13.97        2.454
      3     105.81      14.01        2.450
      4     107.02      14.65        2.393
      5     103.27      16.83        2.227
      6     105.20      18.35        2.129

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     107.02   Tc(MIN.) =   14.65
  TOTAL AREA(ACRES) =       57.1

****************************************************************************
  FLOW PROCESS FROM NODE    258.00 TO NODE    259.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   875.99  DOWNSTREAM(FEET) =   870.00
  FLOW LENGTH(FEET) =  1560.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  51.0 INCH PIPE IS  40.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.88
  ESTIMATED PIPE DIAMETER(INCH) =  51.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     107.02
  PIPE TRAVEL TIME(MIN.) =   2.93    Tc(MIN.) =   17.58
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    259.00 =    5460.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    259.00 TO NODE    259.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 3 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       97.14    15.45       2.329       57.09
      2      105.58    16.90       2.223       57.09
      3      105.81    16.94       2.220       57.09
      4      107.02    17.58       2.177       57.09
      5      103.27    19.77       2.048       57.09
      6      105.20    21.28       1.971       57.09
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    259.00 =    5460.00 FEET.

  ** MEMORY BANK #  3 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1      122.59     7.81       3.321      100.10
      2      156.76     9.87       2.940      100.10
      3      162.23    10.14       2.898      100.10
      4      163.17    10.20       2.890      100.10
      5      179.23    11.20       2.752      100.10
      6      189.59    12.43       2.607      100.10
      7      189.84    12.49       2.600      100.10
      8      200.67    15.46       2.328      100.10
  LONGEST FLOWPATH FROM NODE     50.00 TO NODE    259.00 =    4738.00 FEET.

  ** PEAK FLOW RATE TABLE **
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1     171.70       7.81        3.321
      2     218.82       9.87        2.940
      3     226.01      10.14        2.898
      4     227.29      10.20        2.890
```

```
      5     249.68      11.20        2.752
      6     267.77      12.43        2.607
      7     268.41      12.49        2.600
      8     297.65      15.45        2.329
      9     297.77      15.46        2.328
     10     297.17      16.90        2.223
     11     297.18      16.94        2.220
     12     294.69      17.58        2.177
     13     279.85      19.77        2.048
     14     275.14      21.28        1.971

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     297.77   Tc(MIN.) =   15.46
  TOTAL AREA(ACRES) =      157.2

****************************************************************************
  FLOW PROCESS FROM NODE    259.00 TO NODE    259.00 IS CODE =  12
----------------------------------------------------------------------------
  >>>>>CLEAR MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    259.00 TO NODE    355.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   870.00  DOWNSTREAM(FEET) =   869.85
  FLOW LENGTH(FEET) =    80.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  87.0 INCH PIPE IS  66.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.83
  ESTIMATED PIPE DIAMETER(INCH) =  87.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     297.77
  PIPE TRAVEL TIME(MIN.) =   0.15    Tc(MIN.) =   15.61
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    355.00 =    5540.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    355.00 TO NODE    355.00 IS CODE =  10
----------------------------------------------------------------------------
  >>>>>MAIN-STREAM MEMORY COPIED ONTO MEMORY BANK # 1 <<<<<
============================================================================

****************************************************************************
  FLOW PROCESS FROM NODE    300.00 TO NODE    301.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   777.00
  UPSTREAM ELEVATION(FEET) =    918.50
  DOWNSTREAM ELEVATION(FEET) =    911.90
  ELEVATION DIFFERENCE(FEET) =      6.60
  TC = 0.303*[(  777.00**3)/(     6.60)]**.2 =   11.270
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.744
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8875
  SOIL CLASSIFICATION IS "D"
  SUBAREA RUNOFF(CFS) =      0.24
  TOTAL AREA(ACRES) =      0.10   TOTAL RUNOFF(CFS) =      0.24

****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    301.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.744
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8543
  SOIL CLASSIFICATION IS "A"
```

```
  SUBAREA AREA(ACRES) =    3.50   SUBAREA RUNOFF(CFS) =    8.20
  TOTAL AREA(ACRES) =        3.6   TOTAL RUNOFF(CFS) =       8.45
  TC(MIN.) =   11.27

****************************************************************************
  FLOW PROCESS FROM NODE    301.00 TO NODE    312.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   907.50  DOWNSTREAM(FEET) =   907.00
  FLOW LENGTH(FEET) =    25.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  10.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   8.87
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       8.45
  PIPE TRAVEL TIME(MIN.) =   0.05    Tc(MIN.) =   11.32
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    312.00 =     802.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    312.00 TO NODE    312.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   11.32
  RAINFALL INTENSITY(INCH/HR) =   2.74
  TOTAL STREAM AREA(ACRES) =     3.60
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      8.45

****************************************************************************
  FLOW PROCESS FROM NODE    310.00 TO NODE    311.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   208.00
  UPSTREAM ELEVATION(FEET) =    917.90
  DOWNSTREAM ELEVATION(FEET) =    913.40
  ELEVATION DIFFERENCE(FEET) =      4.50
  TC = 0.303*[(  208.00**3)/(     4.50)]**.2 =    5.518
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.978
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8626
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      1.06
  TOTAL AREA(ACRES) =      0.31   TOTAL RUNOFF(CFS) =      1.06

****************************************************************************
  FLOW PROCESS FROM NODE    311.00 TO NODE    312.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   908.30  DOWNSTREAM(FEET) =   907.00
  FLOW LENGTH(FEET) =   255.00   MANNING'S N =  0.012
  ESTIMATED PIPE DIAMETER(INCH) INCREASED TO 12.000
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   3.22
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       1.06
  PIPE TRAVEL TIME(MIN.) =   1.32    Tc(MIN.) =    6.84
  LONGEST FLOWPATH FROM NODE    310.00 TO NODE    312.00 =     463.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    312.00 TO NODE    312.00 IS CODE =   1
----------------------------------------------------------------------------
```

```
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =    6.84
  RAINFALL INTENSITY(INCH/HR) =   3.56
  TOTAL STREAM AREA(ACRES) =     0.31
  PEAK FLOW RATE(CFS) AT CONFLUENCE =      1.06

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1        8.45    11.32        2.738          3.60
      2        1.06     6.84        3.557          0.31

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1        6.17     6.84       3.557
      2        9.27    11.32       2.738

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =       9.27   Tc(MIN.) =   11.32
  TOTAL AREA(ACRES) =        3.9
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    312.00 =     802.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    312.00 TO NODE    313.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   907.00  DOWNSTREAM(FEET) =   906.35
  FLOW LENGTH(FEET) =   125.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  13.8 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.53
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.27
  PIPE TRAVEL TIME(MIN.) =   0.38    Tc(MIN.) =   11.69
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    313.00 =     927.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    313.00 TO NODE    313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.692
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8538
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    1.61
  TOTAL AREA(ACRES) =        4.6   TOTAL RUNOFF(CFS) =      10.87
  TC(MIN.) =   11.69

****************************************************************************
  FLOW PROCESS FROM NODE    313.00 TO NODE    313.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.692
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8836
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.78   SUBAREA RUNOFF(CFS) =    1.86
  TOTAL AREA(ACRES) =        5.4   TOTAL RUNOFF(CFS) =      12.73
  TC(MIN.) =   11.69
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    313.00 TO NODE    314.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   906.35  DOWNSTREAM(FEET) =   905.70
  FLOW LENGTH(FEET) =   125.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.00
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.73
  PIPE TRAVEL TIME(MIN.) =   0.35    Tc(MIN.) =   12.04
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    314.00 =    1052.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    314.00 TO NODE    314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.651
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8535
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    1.58
  TOTAL AREA(ACRES) =        6.1   TOTAL RUNOFF(CFS) =      14.31
  TC(MIN.) =   12.04

****************************************************************************
  FLOW PROCESS FROM NODE    314.00 TO NODE    314.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.651
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8834
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.77   SUBAREA RUNOFF(CFS) =    1.80
  TOTAL AREA(ACRES) =        6.9   TOTAL RUNOFF(CFS) =      16.12
  TC(MIN.) =   12.04

****************************************************************************
  FLOW PROCESS FROM NODE    314.00 TO NODE    315.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   905.70  DOWNSTREAM(FEET) =   905.05
  FLOW LENGTH(FEET) =   125.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  18.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.23
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      16.12
  PIPE TRAVEL TIME(MIN.) =   0.33    Tc(MIN.) =   12.37
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    315.00 =    1177.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    315.00 TO NODE    315.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.613
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8532
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.70   SUBAREA RUNOFF(CFS) =    1.56
  TOTAL AREA(ACRES) =        7.6   TOTAL RUNOFF(CFS) =      17.68
  TC(MIN.) =   12.37

****************************************************************************
  FLOW PROCESS FROM NODE    315.00 TO NODE    315.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.613
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8832
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.32   SUBAREA RUNOFF(CFS) =    3.05
  TOTAL AREA(ACRES) =        8.9   TOTAL RUNOFF(CFS) =      20.72
  TC(MIN.) =   12.37
  ** PEAK FLOW RATE TABLE **
  STREAM   RUNOFF       Tc
  NUMBER    (CFS)     (MIN.)
     1       20.76       7.96
     2       20.72      12.37
  NEW PEAK FLOW DATA ARE:
  PEAK FLOW RATE(CFS) =      20.76  Tc(MIN.) =    7.96

****************************************************************************
  FLOW PROCESS FROM NODE    315.00 TO NODE    316.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   905.05  DOWNSTREAM(FEET) =   904.40
  FLOW LENGTH(FEET) =   125.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  19.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.70
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      20.76
  PIPE TRAVEL TIME(MIN.) =   0.31    Tc(MIN.) =    8.27
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    316.00 =    1302.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    316.00 TO NODE    316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.222
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8579
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.80   SUBAREA RUNOFF(CFS) =    2.21
  TOTAL AREA(ACRES) =        9.7   TOTAL RUNOFF(CFS) =      22.98
  TC(MIN.) =    8.27

****************************************************************************
  FLOW PROCESS FROM NODE    316.00 TO NODE    316.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.222
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8859
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.67   SUBAREA RUNOFF(CFS) =    4.77
  TOTAL AREA(ACRES) =       11.3   TOTAL RUNOFF(CFS) =      27.74
  TC(MIN.) =    8.27

****************************************************************************
  FLOW PROCESS FROM NODE    316.00 TO NODE    325.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   904.40  DOWNSTREAM(FEET) =   903.25
  FLOW LENGTH(FEET) =   230.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  30.0 INCH PIPE IS  22.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.07
  ESTIMATED PIPE DIAMETER(INCH) =  30.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      27.74
  PIPE TRAVEL TIME(MIN.) =   0.54    Tc(MIN.) =    8.82
  LONGEST FLOWPATH FROM NODE    300.00 TO NODE    325.00 =    1532.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    325.00 TO NODE    325.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =    8.82
  RAINFALL INTENSITY(INCH/HR) =   3.12
  TOTAL STREAM AREA(ACRES) =    11.35
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     27.74

****************************************************************************
  FLOW PROCESS FROM NODE    320.00 TO NODE    321.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   737.00
  UPSTREAM ELEVATION(FEET) =    919.00
  DOWNSTREAM ELEVATION(FEET) =    912.80
  ELEVATION DIFFERENCE(FEET) =      6.20
  TC = 0.303*[(  737.00**3)/(     6.20)]**.2 =   11.056
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.771
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8545
  SOIL CLASSIFICATION IS "A"
  SUBAREA RUNOFF(CFS) =      3.29
  TOTAL AREA(ACRES) =      1.39   TOTAL RUNOFF(CFS) =      3.29

****************************************************************************
  FLOW PROCESS FROM NODE    321.00 TO NODE    321.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.771
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8840
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.00   SUBAREA RUNOFF(CFS) =    4.90
  TOTAL AREA(ACRES) =        3.4   TOTAL RUNOFF(CFS) =       8.19
  TC(MIN.) =   11.06

****************************************************************************
  FLOW PROCESS FROM NODE    321.00 TO NODE    322.00 IS CODE =  91
----------------------------------------------------------------------------
  >>>>>COMPUTE "V" GUTTER FLOW TRAVEL TIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION(FEET) =    912.80
  DOWNSTREAM NODE ELEVATION(FEET) =    910.30
  CHANNEL LENGTH THRU SUBAREA(FEET) =   495.00
  "V" GUTTER WIDTH(FEET) =   3.00   GUTTER HIKE(FEET) =  0.500
  PAVEMENT LIP(FEET) =  0.050   MANNING'S N = .0150
  PAVEMENT CROSSFALL(DECIMAL NOTATION) = 0.02000
  MAXIMUM DEPTH(FEET) =   0.75
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.459
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8824
  SOIL CLASSIFICATION IS "C"
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =     10.12
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   2.89
  AVERAGE FLOW DEPTH(FEET) =   0.75   FLOOD WIDTH(FEET) =   23.00
  "V" GUTTER FLOW TRAVEL TIME(MIN.) =   2.85   Tc(MIN.) =   13.91
  SUBAREA AREA(ACRES) =    1.77       SUBAREA RUNOFF(CFS) =    3.84
  TOTAL AREA(ACRES) =        5.2         PEAK FLOW RATE(CFS) =      12.03

         ==>>ERROR:FLOW EXCEEDS CAPACITY OF CHANNEL WITH
             NORMAL DEPTH EQUAL TO SPECIFIED MAXIMUM ALLOWABLE DEPTH.
             AS AN APPROXIMATION, TRAVEL TIME CALCULATIONS ARE BASED
```

```
            ON FLOW DEPTH EQUAL TO THE SPECIFIED MAXIMUM ALLOWABLE DEPTH.


  END OF SUBAREA "V" GUTTER HYDRAULICS:
  DEPTH(FEET) =  0.75   FLOOD WIDTH(FEET) =   23.00
  FLOW VELOCITY(FEET/SEC.) =   3.44   DEPTH*VELOCITY(FT*FT/SEC) =   2.58
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    322.00 =    1232.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    322.00 TO NODE    323.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   905.15  DOWNSTREAM(FEET) =   903.70
  FLOW LENGTH(FEET) =   285.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  14.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.88
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.03
  PIPE TRAVEL TIME(MIN.) =   0.81    Tc(MIN.) =   14.72
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    323.00 =    1517.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    323.00 TO NODE    323.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.388
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8820
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.63
  TOTAL AREA(ACRES) =        5.5   TOTAL RUNOFF(CFS) =      12.66
  TC(MIN.) =   14.72

****************************************************************************
  FLOW PROCESS FROM NODE    323.00 TO NODE    324.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.70  DOWNSTREAM(FEET) =   903.40
  FLOW LENGTH(FEET) =    55.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  15.0 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.11
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      12.66
  PIPE TRAVEL TIME(MIN.) =   0.15    Tc(MIN.) =   14.87
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    324.00 =    1572.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    324.00 TO NODE    324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.376
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8510
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.30   SUBAREA RUNOFF(CFS) =    0.61
  TOTAL AREA(ACRES) =        5.8   TOTAL RUNOFF(CFS) =      13.27
  TC(MIN.) =   14.87

****************************************************************************
  FLOW PROCESS FROM NODE    324.00 TO NODE    324.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.376
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8819
```

```
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.10   SUBAREA RUNOFF(CFS) =    0.21
  TOTAL AREA(ACRES) =        5.9   TOTAL RUNOFF(CFS) =      13.48
  TC(MIN.) =   14.87

****************************************************************************
  FLOW PROCESS FROM NODE    324.00 TO NODE    325.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.40  DOWNSTREAM(FEET) =   903.25
  FLOW LENGTH(FEET) =    35.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  17.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.60
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.48
  PIPE TRAVEL TIME(MIN.) =   0.10    Tc(MIN.) =   14.97
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    325.00 =    1607.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    325.00 TO NODE    325.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  2
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   14.97
  RAINFALL INTENSITY(INCH/HR) =   2.37
  TOTAL STREAM AREA(ACRES) =     5.86
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.48

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       27.74     8.82        3.118         11.35
      1       26.29    13.23        2.524         11.35
      2       13.48    14.97        2.367          5.86

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  2 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       35.68     8.82       3.118
      2       38.20    13.23       2.524
      3       38.13    14.97       2.367

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      38.20   Tc(MIN.) =   13.23
  TOTAL AREA(ACRES) =       17.2
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    325.00 =    1607.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    325.00 TO NODE    326.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.25  DOWNSTREAM(FEET) =   902.75
  FLOW LENGTH(FEET) =    95.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  33.0 INCH PIPE IS  25.5 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   7.76
  ESTIMATED PIPE DIAMETER(INCH) =  33.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      38.20
  PIPE TRAVEL TIME(MIN.) =   0.20    Tc(MIN.) =   13.44
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    326.00 =    1702.00 FEET.
```

```
****************************************************************************
  FLOW PROCESS FROM NODE    326.00 TO NODE    326.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.504
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8826
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.38   SUBAREA RUNOFF(CFS) =    3.05
  TOTAL AREA(ACRES) =       18.6   TOTAL RUNOFF(CFS) =      41.25
  TC(MIN.) =   13.44

****************************************************************************
  FLOW PROCESS FROM NODE    326.00 TO NODE    327.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   902.75  DOWNSTREAM(FEET) =   877.00
  FLOW LENGTH(FEET) =    75.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  18.0 INCH PIPE IS  10.4 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  38.96
  ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      41.25
  PIPE TRAVEL TIME(MIN.) =   0.03    Tc(MIN.) =   13.47
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    327.00 =    1777.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    327.00 TO NODE    327.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
============================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  1 ARE:
  TIME OF CONCENTRATION(MIN.) =   13.47
  RAINFALL INTENSITY(INCH/HR) =   2.50
  TOTAL STREAM AREA(ACRES) =    18.59
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     41.25

****************************************************************************
  FLOW PROCESS FROM NODE    340.00 TO NODE    341.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   560.00
  UPSTREAM ELEVATION(FEET) =    917.30
  DOWNSTREAM ELEVATION(FEET) =    910.30
  ELEVATION DIFFERENCE(FEET) =      7.00
  TC = 0.303*[(  560.00**3)/(     7.00)]**.2 =    9.151
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.058
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8853
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      0.62
  TOTAL AREA(ACRES) =      0.23   TOTAL RUNOFF(CFS) =      0.62

****************************************************************************
  FLOW PROCESS FROM NODE    341.00 TO NODE    341.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.058
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8567
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    3.52   SUBAREA RUNOFF(CFS) =    9.22
  TOTAL AREA(ACRES) =        3.8   TOTAL RUNOFF(CFS) =       9.84
```

```
  TC(MIN.) =    9.15

****************************************************************************
  FLOW PROCESS FROM NODE    341.00 TO NODE    342.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   906.00  DOWNSTREAM(FEET) =   905.10
  FLOW LENGTH(FEET) =   170.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  21.0 INCH PIPE IS  14.3 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   5.64
  ESTIMATED PIPE DIAMETER(INCH) =  21.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =       9.84
  PIPE TRAVEL TIME(MIN.) =   0.50    Tc(MIN.) =    9.65
  LONGEST FLOWPATH FROM NODE    340.00 TO NODE    342.00 =     730.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    342.00 TO NODE    342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.974
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8849
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.53   SUBAREA RUNOFF(CFS) =    4.03
  TOTAL AREA(ACRES) =        5.3   TOTAL RUNOFF(CFS) =      13.87
  TC(MIN.) =    9.65

****************************************************************************
  FLOW PROCESS FROM NODE    342.00 TO NODE    342.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.974
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8561
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    0.46   SUBAREA RUNOFF(CFS) =    1.17
  TOTAL AREA(ACRES) =        5.7   TOTAL RUNOFF(CFS) =      15.04
  TC(MIN.) =    9.65

****************************************************************************
  FLOW PROCESS FROM NODE    342.00 TO NODE    343.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   905.10  DOWNSTREAM(FEET) =   904.20
  FLOW LENGTH(FEET) =   170.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  24.0 INCH PIPE IS  17.2 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.23
  ESTIMATED PIPE DIAMETER(INCH) =  24.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      15.04
  PIPE TRAVEL TIME(MIN.) =   0.45    Tc(MIN.) =   10.11
  LONGEST FLOWPATH FROM NODE    340.00 TO NODE    343.00 =     900.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    343.00 TO NODE    343.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.903
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8846
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    1.75   SUBAREA RUNOFF(CFS) =    4.49
  TOTAL AREA(ACRES) =        7.5   TOTAL RUNOFF(CFS) =      19.53
  TC(MIN.) =   10.11

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

```
 FLOW PROCESS FROM NODE    343.00 TO NODE    343.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.903
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8555
 SOIL CLASSIFICATION IS "A"
 SUBAREA AREA(ACRES) =    1.27   SUBAREA RUNOFF(CFS) =    3.15
 TOTAL AREA(ACRES) =        8.8   TOTAL RUNOFF(CFS) =      22.69
 TC(MIN.) =   10.11

****************************************************************************
 FLOW PROCESS FROM NODE    343.00 TO NODE    344.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   904.20  DOWNSTREAM(FEET) =   903.50
 FLOW LENGTH(FEET) =   145.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  27.0 INCH PIPE IS  22.1 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =   6.52
 ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      22.69
 PIPE TRAVEL TIME(MIN.) =   0.37    Tc(MIN.) =   10.48
 LONGEST FLOWPATH FROM NODE    340.00 TO NODE    344.00 =    1045.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    344.00 TO NODE    344.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.849
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8844
 SOIL CLASSIFICATION IS "C"
 SUBAREA AREA(ACRES) =    0.73   SUBAREA RUNOFF(CFS) =    1.84
 TOTAL AREA(ACRES) =        9.5   TOTAL RUNOFF(CFS) =      24.53
 TC(MIN.) =   10.48

****************************************************************************
 FLOW PROCESS FROM NODE    344.00 TO NODE    344.00 IS CODE =  81
----------------------------------------------------------------------------
 >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
  100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.849
 COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8551
 SOIL CLASSIFICATION IS "A"
 SUBAREA AREA(ACRES) =    0.48   SUBAREA RUNOFF(CFS) =    1.17
 TOTAL AREA(ACRES) =       10.0   TOTAL RUNOFF(CFS) =      25.70
 TC(MIN.) =   10.48

****************************************************************************
 FLOW PROCESS FROM NODE    344.00 TO NODE    345.00 IS CODE =  31
----------------------------------------------------------------------------
 >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
 >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
 ELEVATION DATA: UPSTREAM(FEET) =   903.50  DOWNSTREAM(FEET) =   877.00
 FLOW LENGTH(FEET) =   240.00   MANNING'S N =  0.012
 DEPTH OF FLOW IN  18.0 INCH PIPE IS  11.1 INCHES
 PIPE-FLOW VELOCITY(FEET/SEC.) =  22.56
 ESTIMATED PIPE DIAMETER(INCH) =  18.00    NUMBER OF PIPES =   1
 PIPE-FLOW(CFS) =      25.70
 PIPE TRAVEL TIME(MIN.) =   0.18    Tc(MIN.) =   10.66
 LONGEST FLOWPATH FROM NODE    340.00 TO NODE    345.00 =    1285.00 FEET.

****************************************************************************
 FLOW PROCESS FROM NODE    345.00 TO NODE    345.00 IS CODE =   1
----------------------------------------------------------------------------
 >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
```

```
================================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  2 ARE:
  TIME OF CONCENTRATION(MIN.) =   10.66
  RAINFALL INTENSITY(INCH/HR) =   2.82
  TOTAL STREAM AREA(ACRES) =     9.97
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     25.70

****************************************************************************
  FLOW PROCESS FROM NODE    350.00 TO NODE    351.00 IS CODE =  21
----------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
============================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH(FEET) =   875.00
  UPSTREAM ELEVATION(FEET) =    917.30
  DOWNSTREAM ELEVATION(FEET) =    910.00
  ELEVATION DIFFERENCE(FEET) =      7.30
  TC = 0.303*[(  875.00**3)/(     7.30)]**.2 =   11.861
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.672
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8835
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      0.78
  TOTAL AREA(ACRES) =      0.33   TOTAL RUNOFF(CFS) =      0.78

****************************************************************************
  FLOW PROCESS FROM NODE    351.00 TO NODE    351.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.672
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8537
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    2.46   SUBAREA RUNOFF(CFS) =    5.61
  TOTAL AREA(ACRES) =        2.8   TOTAL RUNOFF(CFS) =       6.39
  TC(MIN.) =   11.86

****************************************************************************
  FLOW PROCESS FROM NODE    351.00 TO NODE    352.00 IS CODE =  91
----------------------------------------------------------------------------
  >>>>>COMPUTE "V" GUTTER FLOW TRAVEL TIME THRU SUBAREA<<<<<
============================================================================
  UPSTREAM NODE ELEVATION(FEET) =    910.00
  DOWNSTREAM NODE ELEVATION(FEET) =    907.40
  CHANNEL LENGTH THRU SUBAREA(FEET) =   480.00
  "V" GUTTER WIDTH(FEET) =   3.00   GUTTER HIKE(FEET) =  0.500
  PAVEMENT LIP(FEET) =  0.050   MANNING'S N = .0150
  PAVEMENT CROSSFALL(DECIMAL NOTATION) = 0.02000
  MAXIMUM DEPTH(FEET) =   0.75
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.388
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8820
  SOIL CLASSIFICATION IS "C"
  TRAVEL TIME COMPUTED USING ESTIMATED FLOW(CFS) =      6.66
  TRAVEL TIME THRU SUBAREA BASED ON VELOCITY(FEET/SEC.) =   2.80
  AVERAGE FLOW DEPTH(FEET) =   0.69   FLOOD WIDTH(FEET) =   17.45
  "V" GUTTER FLOW TRAVEL TIME(MIN.) =   2.85   Tc(MIN.) =   14.72
  SUBAREA AREA(ACRES) =    0.26       SUBAREA RUNOFF(CFS) =    0.55
  TOTAL AREA(ACRES) =        3.0         PEAK FLOW RATE(CFS) =       6.94

  END OF SUBAREA "V" GUTTER HYDRAULICS:
  DEPTH(FEET) =  0.70   FLOOD WIDTH(FEET) =   18.08
  FLOW VELOCITY(FEET/SEC.) =   2.79   DEPTH*VELOCITY(FT*FT/SEC) =   1.95
  LONGEST FLOWPATH FROM NODE    350.00 TO NODE    352.00 =    1355.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    352.00 TO NODE    352.00 IS CODE =  81
----------------------------------------------------------------------------
```

```
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.388
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8512
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    3.13   SUBAREA RUNOFF(CFS) =    6.36
  TOTAL AREA(ACRES) =        6.2   TOTAL RUNOFF(CFS) =      13.30
  TC(MIN.) =   14.72

****************************************************************************
  FLOW PROCESS FROM NODE    352.00 TO NODE    353.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
================================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   903.00  DOWNSTREAM(FEET) =   877.00
  FLOW LENGTH(FEET) =    50.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  12.0 INCH PIPE IS   5.9 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  34.39
  ESTIMATED PIPE DIAMETER(INCH) =  12.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      13.30
  PIPE TRAVEL TIME(MIN.) =   0.02    Tc(MIN.) =   14.74
  LONGEST FLOWPATH FROM NODE    350.00 TO NODE    353.00 =    1405.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    353.00 TO NODE    353.00 IS CODE =   1
----------------------------------------------------------------------------
  >>>>>DESIGNATE INDEPENDENT STREAM FOR CONFLUENCE<<<<<
  >>>>>AND COMPUTE VARIOUS CONFLUENCED STREAM VALUES<<<<<
================================================================================
  TOTAL NUMBER OF STREAMS =  3
  CONFLUENCE VALUES USED FOR INDEPENDENT STREAM  3 ARE:
  TIME OF CONCENTRATION(MIN.) =   14.74
  RAINFALL INTENSITY(INCH/HR) =   2.39
  TOTAL STREAM AREA(ACRES) =     6.18
  PEAK FLOW RATE(CFS) AT CONFLUENCE =     13.30

  ** CONFLUENCE DATA **
  STREAM     RUNOFF       Tc      INTENSITY      AREA
  NUMBER      (CFS)     (MIN.)   (INCH/HOUR)    (ACRE)
      1       39.44     9.05        3.074         18.59
      1       41.25    13.47        2.501         18.59
      1       40.99    15.21        2.348         18.59
      2       25.70    10.66        2.825          9.97
      3       13.30    14.74        2.386          6.18

  RAINFALL INTENSITY AND TIME OF CONCENTRATION RATIO
  CONFLUENCE FORMULA USED FOR  3 STREAMS.

  ** PEAK FLOW RATE TABLE **
  STREAM     RUNOFF      Tc      INTENSITY
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)
      1       69.45     9.05       3.074
      2       71.55    10.66       2.825
      3       76.16    13.47       2.501
      4       74.74    14.74       2.386
      5       75.44    15.21       2.348

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =      76.16   Tc(MIN.) =   13.47
  TOTAL AREA(ACRES) =       34.7
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    353.00 =    1777.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    353.00 TO NODE    353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
================================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.501
```

```
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7261
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    2.64   SUBAREA RUNOFF(CFS) =    4.79
  TOTAL AREA(ACRES) =       37.4   TOTAL RUNOFF(CFS) =      80.95
  TC(MIN.) =   13.47

****************************************************************************
  FLOW PROCESS FROM NODE    353.00 TO NODE    353.00 IS CODE =  81
----------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
============================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  2.501
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8522
  SOIL CLASSIFICATION IS "A"
  SUBAREA AREA(ACRES) =    2.02   SUBAREA RUNOFF(CFS) =    4.31
  TOTAL AREA(ACRES) =       39.4   TOTAL RUNOFF(CFS) =      85.26
  TC(MIN.) =   13.47

****************************************************************************
  FLOW PROCESS FROM NODE    354.00 TO NODE    355.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   877.00  DOWNSTREAM(FEET) =   869.85
  FLOW LENGTH(FEET) =    92.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  27.0 INCH PIPE IS  20.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  26.07
  ESTIMATED PIPE DIAMETER(INCH) =  27.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      85.26
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =   13.53
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    355.00 =    1869.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    355.00 TO NODE    355.00 IS CODE =  11
----------------------------------------------------------------------------
  >>>>>CONFLUENCE MEMORY BANK # 1 WITH THE MAIN-STREAM MEMORY<<<<<
============================================================================

  ** MAIN STREAM CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1       80.88     9.11       3.064       39.40
      2       81.97    10.72       2.817       39.40
      3       85.26    13.53       2.495       39.40
      4       83.38    14.80       2.381       39.40
      5       83.92    15.27       2.343       39.40
  LONGEST FLOWPATH FROM NODE    320.00 TO NODE    355.00 =    1869.00 FEET.

  ** MEMORY BANK #  1 CONFLUENCE DATA **
  STREAM     RUNOFF      Tc      INTENSITY     AREA
  NUMBER      (CFS)    (MIN.)   (INCH/HOUR)   (ACRE)
      1      171.70     7.98       3.282      157.19
      2      218.82    10.03       2.915      157.19
      3      226.01    10.30       2.875      157.19
      4      227.29    10.36       2.867      157.19
      5      249.68    11.36       2.732      157.19
      6      267.77    12.59       2.590      157.19
      7      268.41    12.65       2.584      157.19
      8      297.65    15.60       2.317      157.19
      9      297.77    15.61       2.316      157.19
     10      297.17    17.05       2.212      157.19
     11      297.18    17.09       2.210      157.19
     12      294.69    17.73       2.167      157.19
     13      279.85    19.92       2.040      157.19
     14      275.14    21.44       1.964      157.19
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    355.00 =    5540.00 FEET.

  ** PEAK FLOW RATE TABLE **
```

```
  STREAM    RUNOFF       Tc      INTENSITY
  NUMBER     (CFS)     (MIN.)   (INCH/HOUR)
      1     242.56       7.98        3.282
      2     281.19       9.11        3.064
      3     295.77      10.03        2.915
      4     304.83      10.30        2.875
      5     306.52      10.36        2.867
      6     317.49      10.72        2.817
      7     329.20      11.36        2.732
      8     347.10      12.59        2.590
      9     348.13      12.65        2.584
     10     344.46      13.53        2.495
     11     365.79      14.80        2.381
     12     375.26      15.27        2.343
     13     380.64      15.60        2.317
     14     380.72      15.61        2.316
     15     376.41      17.05        2.212
     16     376.32      17.09        2.210
     17     372.32      17.73        2.167
     18     352.92      19.92        2.040
     19     345.49      21.44        1.964

  COMPUTED CONFLUENCE ESTIMATES ARE AS FOLLOWS:
  PEAK FLOW RATE(CFS) =     380.72   Tc(MIN.) =   15.61
  TOTAL AREA(ACRES) =      196.6

****************************************************************************
  FLOW PROCESS FROM NODE    355.00 TO NODE    356.00 IS CODE =  31
----------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
============================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   868.24  DOWNSTREAM(FEET) =   867.56
  FLOW LENGTH(FEET) =    65.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  69.0 INCH PIPE IS  52.7 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =  17.87
  ESTIMATED PIPE DIAMETER(INCH) =  69.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =     380.72
  PIPE TRAVEL TIME(MIN.) =   0.06    Tc(MIN.) =   15.67
  LONGEST FLOWPATH FROM NODE    250.00 TO NODE    356.00 =    5605.00 FEET.

****************************************************************************
  FLOW PROCESS FROM NODE    356.00 TO NODE    356.00 IS CODE =  16
----------------------------------------------------------------------------
  >>>>>USER SPECIFIED CONSTANT SOURCE FLOW AT NODE<<<<<
============================================================================
  USER-SPECIFIED CONSTANT SOURCE FLOW =   110.00(CFS)
  USER-SPECIFIED AREA ASSOCIATED TO SOURCE FLOW =    55.00(ACRES)
  * CUMULATIVE SOURCE FLOW DATA: FLOW(CFS) =   110.00  AREA(AC.) =    55.00
  * SUMMED DATA: FLOW(CFS) =   490.72    TOTAL AREA(ACRES) =   251.59
============================================================================
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =      196.6  TC(MIN.) =     15.67
  PEAK FLOW RATE(CFS)   =     380.72
  * CUMULATIVE SOURCE FLOW DATA: FLOW(CFS) =     110.00  AREA(AC.) =       55.0
  * SUMMED DATA: FLOW(CFS) =     490.72    TOTAL AREA(ACRES) =      251.6
  *** PEAK FLOW RATE TABLE ***
         Q(CFS)   Tc(MIN.)
  1      242.56       8.05
  2      281.19       9.18
  3      295.77      10.09
  4      304.83      10.37
  5      306.52      10.42
  6      317.49      10.78
  7      329.20      11.42
  8      347.10      12.65
  9      348.13      12.71
 10      344.46      13.59
 11      365.79      14.86
```

12	375.26	15.33
13	380.64	15.66
14	380.72	15.67
15	376.41	17.11
16	376.32	17.15
17	372.32	17.80
18	352.92	19.99
19	345.49	21.50

==========

==========

END OF RATIONAL METHOD ANALYSIS

```
**************************************************************************
            RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM BASED ON
        RIVERSIDE COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
                    (RCFC&WCD)  1978 HYDROLOGY MANUAL
         (c) Copyright 1982-99 Advanced Engineering Software (aes)
             Ver. 1.5A Release Date: 01/01/99  License ID 1435

                          Analysis prepared by:

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 ************************** DESCRIPTION OF STUDY **************************
* JURUPA VALLEY COMMERCE PARK                                            *
* BUILDING 5 PROPOSED CONDITION                                          *
* 100-YEAR                                                               *
 **************************************************************************

  FILE NAME: C:\XDRIVE\3384\3384C.DAT
  TIME/DATE OF STUDY: 07:48 06/20/2023
--------------------------------------------------------------------------
  USER SPECIFIED HYDROLOGY AND HYDRAULIC MODEL INFORMATION:
--------------------------------------------------------------------------
  USER SPECIFIED STORM EVENT(YEAR) =  100.00
  SPECIFIED MINIMUM PIPE SIZE(INCH) =  12.00
  SPECIFIED PERCENT OF GRADIENTS(DECIMAL) TO USE FOR FRICTION SLOPE = 0.95
  2-YEAR, 1-HOUR PRECIPITATION(INCH) =  0.520
  100-YEAR, 1-HOUR PRECIPITATION(INCH) =  1.150
  COMPUTED RAINFALL INTENSITY DATA:
  STORM EVENT =  100.00   1-HOUR INTENSITY(INCH/HOUR) =   1.150
  SLOPE OF INTENSITY DURATION CURVE = 0.5200
  RCFC&WCD HYDROLOGY MANUAL "C"-VALUES USED FOR RATIONAL METHOD
  NOTE: CONSIDER ALL CONFLUENCE STREAM COMBINATIONS
        FOR ALL DOWNSTREAM ANALYSES
  *USER-DEFINED STREET-SECTIONS FOR COUPLED PIPEFLOW AND STREETFLOW MODEL*
     HALF-  CROWN TO   STREET-CROSSFALL:   CURB  GUTTER-GEOMETRIES:  MANNING
     WIDTH  CROSSFALL  IN-  / OUT-/PARK-  HEIGHT  WIDTH  LIP   HIKE  FACTOR
NO.   (FT)     (FT)    SIDE / SIDE/ WAY    (FT)    (FT)  (FT)  (FT)    (n)
===  =====  =========  =================  ======  ===== ====== ===== =======
  1   30.0     20.0    0.018/0.018/0.020   0.67    2.00 0.0313 0.167 0.0150

  GLOBAL STREET FLOW-DEPTH CONSTRAINTS:
    1. Relative Flow-Depth =  0.00 FEET
       as (Maximum Allowable Street Flow Depth) - (Top-of-Curb)
    2. (Depth)*(Velocity) Constraint =  6.0 (FT*FT/S)
  *SIZE PIPE WITH A FLOW CAPACITY GREATER THAN
   OR EQUAL TO THE UPSTREAM TRIBUTARY PIPE.*

**************************************************************************
  FLOW PROCESS FROM NODE    400.00 TO NODE    401.00 IS CODE =  21
--------------------------------------------------------------------------
  >>>>>RATIONAL METHOD INITIAL SUBAREA ANALYSIS<<<<<
==========================================================================
         ASSUMED INITIAL SUBAREA UNIFORM
         DEVELOPMENT IS COMMERCIAL
  TC = K*[(LENGTH**3)/(ELEVATION CHANGE)]**.2
  INITIAL SUBAREA FLOW-LENGTH =   523.00
  UPSTREAM ELEVATION =    875.02
  DOWNSTREAM ELEVATION =    866.36
  ELEVATION DIFFERENCE =      8.66
  TC = 0.303*[(  523.00**3)/(     8.66)]**.2 =    8.417
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.193
  COMMERCIAL DEVELOPMENT RUNOFF COEFFICIENT = .8858
  SOIL CLASSIFICATION IS "C"
  SUBAREA RUNOFF(CFS) =      5.80
  TOTAL AREA(ACRES) =      2.05   TOTAL RUNOFF(CFS) =      5.80

**************************************************************************
  FLOW PROCESS FROM NODE    401.00 TO NODE    402.00 IS CODE =  31
--------------------------------------------------------------------------
  >>>>>COMPUTE PIPE-FLOW TRAVEL TIME THRU SUBAREA<<<<<
  >>>>>USING COMPUTER-ESTIMATED PIPESIZE (NON-PRESSURE FLOW)<<<<<
==========================================================================
  ELEVATION DATA: UPSTREAM(FEET) =   862.36  DOWNSTREAM(FEET) =   861.75
  FLOW LENGTH(FEET) =    61.00   MANNING'S N =  0.012
  DEPTH OF FLOW IN  15.0 INCH PIPE IS  10.6 INCHES
  PIPE-FLOW VELOCITY(FEET/SEC.) =   6.24
  ESTIMATED PIPE DIAMETER(INCH) =  15.00    NUMBER OF PIPES =   1
  PIPE-FLOW(CFS) =      5.80
  PIPE TRAVEL TIME(MIN.) =   0.16    Tc(MIN.) =   8.58
  LONGEST FLOWPATH FROM NODE    400.00 TO NODE    402.00 =   584.00 FEET.

**************************************************************************
  FLOW PROCESS FROM NODE    402.00 TO NODE    402.00 IS CODE =  81
--------------------------------------------------------------------------
  >>>>>ADDITION OF SUBAREA TO MAINLINE PEAK FLOW<<<<<
==========================================================================
   100 YEAR RAINFALL INTENSITY(INCH/HOUR) =  3.162
  UNDEVELOPED WATERSHED RUNOFF COEFFICIENT = .7566
  SOIL CLASSIFICATION IS "C"
  SUBAREA AREA(ACRES) =    0.45   SUBAREA RUNOFF(CFS) =    1.08
  TOTAL AREA(ACRES) =     2.50   TOTAL RUNOFF(CFS) =    6.88
  TC(MIN) =   8.58
==========================================================================
```

```
  END OF STUDY SUMMARY:
  TOTAL AREA(ACRES)     =      2.50  TC(MIN.) =      8.58
  PEAK FLOW RATE(CFS)   =      6.88
================================================================================
================================================================================
  END OF RATIONAL METHOD ANALYSIS

1
```

APPENDIX C

DETENTION CALCULATIONS

EXISTING CONDITION HYDROGRAPHS

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

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Study date 06/20/23 File: 2219E012110.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.52	20.49

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.15	45.31

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 0.779(In)
Areal adjustment factor = 99.96 %
Adjusted average point rain = 0.779(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	46.00	0.000
14.920	77.00	0.000
0.100	83.00	0.000

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
46.0	46.0	0.611	0.000	0.611	0.552	0.337
77.0	77.0	0.279	0.000	0.279	0.379	0.106
83.0	83.0	0.210	0.000	0.210	0.003	0.001
					Sum (F) =	0.462

Area averaged mean soil loss (F) (In/Hr) = 0.462
Minimum soil loss rate ((In/Hr)) = 0.231
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1 0.083	1.#IO	100.000	39.708
	Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	4.10	0.383	(0.462)	0.345	0.038
2	0.17	4.60	0.430	(0.462)	0.387	0.043
3	0.25	4.50	0.421	(0.462)	0.379	0.042
4	0.33	4.90	0.458	(0.462)	0.412	0.046
5	0.42	5.50	0.514	0.462	(0.463)	0.052
6	0.50	6.40	0.598	0.462	(0.538)	0.136
7	0.58	7.10	0.664	0.462	(0.597)	0.201
8	0.67	9.00	0.841	0.462	(0.757)	0.379
9	0.75	12.90	1.206	0.462	(1.085)	0.743
10	0.83	29.50	2.757	0.462	(2.482)	2.295
11	0.92	7.00	0.654	0.462	(0.589)	0.192
12	1.00	4.50	0.421	(0.462)	0.379	0.042

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.2

Flood volume = Effective rainfall 0.35(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 0.43(In)
Total soil loss = 1.406(Ac.Ft)
Total rainfall = 0.78(In)
Flood volume = 50172.4 Cubic Feet
Total soil loss = 61228.7 Cubic Feet

Peak flow rate of this hydrograph = 91.178(CFS)

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1 - 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	25.0	50.0	75.0	100.0
0+ 5	0.0105	1.52	Q				
0+10	0.0222	1.71	Q				
0+15	0.0338	1.67	QV				
0+20	0.0463	1.82	QV				
0+25	0.0605	2.06	Q V				
0+30	0.0976	5.40	| QV				
0+35	0.1527	8.00	Q V				
0+40	0.2564	15.05	Q V				
0+45	0.4598	29.54	Q V				
0+50	1.0878	91.18	|			QV	
0+55	1.1403	7.63	| Q			V	
1+ 0	1.1518	1.67	Q			V	

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

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.95	37.43

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.90	74.86

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.341(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 1.341(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	46.00	0.000
14.920	77.00	0.000
0.100	83.00	0.000

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
46.0	46.0	0.611	0.000	0.611	0.552	0.337
77.0	77.0	0.279	0.000	0.279	0.379	0.106
83.0	83.0	0.210	0.000	0.210	0.003	0.001
					Sum (F) =	0.462

Area averaged mean soil loss (F) (In/Hr) = 0.462
Minimum soil loss rate ((In/Hr)) = 0.231
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.209	(0.462)	0.188	0.021
2	0.17	1.30	0.209	(0.462)	0.188	0.021
3	0.25	1.10	0.177	(0.462)	0.159	0.018
4	0.33	1.50	0.241	(0.462)	0.217	0.024
5	0.42	1.50	0.241	(0.462)	0.217	0.024
6	0.50	1.80	0.290	(0.462)	0.261	0.029
7	0.58	1.50	0.241	(0.462)	0.217	0.024
8	0.67	1.80	0.290	(0.462)	0.261	0.029
9	0.75	1.80	0.290	(0.462)	0.261	0.029
10	0.83	1.50	0.241	(0.462)	0.217	0.024
11	0.92	1.60	0.257	(0.462)	0.232	0.026
12	1.00	1.80	0.290	(0.462)	0.261	0.029
13	1.08	2.20	0.354	(0.462)	0.319	0.035
14	1.17	2.20	0.354	(0.462)	0.319	0.035
15	1.25	2.20	0.354	(0.462)	0.319	0.035
16	1.33	2.00	0.322	(0.462)	0.290	0.032
17	1.42	2.60	0.418	(0.462)	0.376	0.042
18	1.50	2.70	0.434	(0.462)	0.391	0.043
19	1.58	2.40	0.386	(0.462)	0.347	0.039
20	1.67	2.70	0.434	(0.462)	0.391	0.043
21	1.75	3.30	0.531	0.462	(0.478)	0.069
22	1.83	3.10	0.499	(0.462)	0.449	0.050
23	1.92	2.90	0.467	(0.462)	0.420	0.047
24	2.00	3.00	0.483	(0.462)	0.434	0.048
25	2.08	3.10	0.499	(0.462)	0.449	0.050
26	2.17	4.20	0.676	0.462	(0.608)	0.213
27	2.25	5.00	0.804	0.462	(0.724)	0.342
28	2.33	3.50	0.563	0.462	(0.507)	0.101
29	2.42	6.80	1.094	0.462	(0.985)	0.632
30	2.50	7.30	1.174	0.462	(1.057)	0.712
31	2.58	8.20	1.319	0.462	(1.187)	0.857
32	2.67	5.90	0.949	0.462	(0.854)	0.487
33	2.75	2.00	0.322	(0.462)	0.290	0.032
34	2.83	1.80	0.290	(0.462)	0.261	0.029
35	2.92	1.80	0.290	(0.462)	0.261	0.029
36	3.00	0.60	0.097	(0.462)	0.087	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.3

Flood volume = Effective rainfall 0.36(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 0.98(In)
Total soil loss = 3.222(Ac.Ft)
Total rainfall = 1.34(In)
Flood volume = 51366.6 Cubic Feet
Total soil loss = 140369.6 Cubic Feet

Peak flow rate of this hydrograph = 34.041(CFS)

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3 - 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	0.0057	0.83	Q
0+10	0.0114	0.83	Q
0+15	0.0163	0.70	Q
0+20	0.0229	0.96	Q
0+25	0.0295	0.96	QV
0+30	0.0374	1.15	Q
0+35	0.0440	0.96	QV
0+40	0.0519	1.15	Q
0+45	0.0599	1.15	QV
0+50	0.0665	0.96	Q V
0+55	0.0735	1.02	QV
1+ 0	0.0814	1.15	QV
1+ 5	0.0911	1.41	Q V
1+10	0.1008	1.41	Q V
1+15	0.1105	1.41	Q V
1+20	0.1193	1.28	Q V
1+25	0.1307	1.66	Q V
1+30	0.1426	1.73	Q V
1+35	0.1532	1.53	Q V
1+40	0.1651	1.73	Q V
1+45	0.1838	2.72	Q V
1+50	0.1975	1.98	Q V
1+55	0.2102	1.85	Q V
2+ 0	0.2234	1.92	Q V
2+ 5	0.2371	1.98	Q V
2+10	0.2955	8.48	Q V
2+15	0.3891	13.59	Q
2+20	0.4166	4.00	Q V
2+25	0.5894	25.09	V Q
2+30	0.7843	28.29	V Q
2+35	1.0187	34.04	Q
2+40	1.1519	19.34	Q V
2+45	1.1607	1.28	Q V
2+50	1.1687	1.15	Q V
2+55	1.1766	1.15	Q V
3+ 0	1.1792	0.38	Q V

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

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.30	51.22

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.50	98.50

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.794(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.793(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	46.00	0.000
14.920	77.00	0.000
0.100	83.00	0.000

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
46.0	46.0	0.611	0.000	0.611	0.552	0.337
77.0	77.0	0.279	0.000	0.279	0.379	0.106
83.0	83.0	0.210	0.000	0.210	0.003	0.001
					Sum (F) =	0.462

Area averaged mean soil loss (F) (In/Hr) = 0.462
Minimum soil loss rate ((In/Hr)) = 0.231
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.108	(0.462)	0.097	0.011
2	0.17	0.60	0.129	(0.462)	0.116	0.013
3	0.25	0.60	0.129	(0.462)	0.116	0.013
4	0.33	0.60	0.129	(0.462)	0.116	0.013
5	0.42	0.60	0.129	(0.462)	0.116	0.013
6	0.50	0.70	0.151	(0.462)	0.136	0.015
7	0.58	0.70	0.151	(0.462)	0.136	0.015
8	0.67	0.70	0.151	(0.462)	0.136	0.015
9	0.75	0.70	0.151	(0.462)	0.136	0.015
10	0.83	0.70	0.151	(0.462)	0.136	0.015
11	0.92	0.70	0.151	(0.462)	0.136	0.015
12	1.00	0.80	0.172	(0.462)	0.155	0.017
13	1.08	0.80	0.172	(0.462)	0.155	0.017
14	1.17	0.80	0.172	(0.462)	0.155	0.017
15	1.25	0.80	0.172	(0.462)	0.155	0.017
16	1.33	0.80	0.172	(0.462)	0.155	0.017
17	1.42	0.80	0.172	(0.462)	0.155	0.017
18	1.50	0.80	0.172	(0.462)	0.155	0.017
19	1.58	0.80	0.172	(0.462)	0.155	0.017
20	1.67	0.80	0.172	(0.462)	0.155	0.017
21	1.75	0.80	0.172	(0.462)	0.155	0.017
22	1.83	0.80	0.172	(0.462)	0.155	0.017
23	1.92	0.80	0.172	(0.462)	0.155	0.017
24	2.00	0.90	0.194	(0.462)	0.174	0.019
25	2.08	0.80	0.172	(0.462)	0.155	0.017
26	2.17	0.90	0.194	(0.462)	0.174	0.019
27	2.25	0.90	0.194	(0.462)	0.174	0.019
28	2.33	0.90	0.194	(0.462)	0.174	0.019
29	2.42	0.90	0.194	(0.462)	0.174	0.019
30	2.50	0.90	0.194	(0.462)	0.174	0.019
31	2.58	0.90	0.194	(0.462)	0.174	0.019
32	2.67	0.90	0.194	(0.462)	0.174	0.019
33	2.75	1.00	0.215	(0.462)	0.194	0.022
34	2.83	1.00	0.215	(0.462)	0.194	0.022
35	2.92	1.00	0.215	(0.462)	0.194	0.022
36	3.00	1.00	0.215	(0.462)	0.194	0.022
37	3.08	1.00	0.215	(0.462)	0.194	0.022
38	3.17	1.10	0.237	(0.462)	0.213	0.024
39	3.25	1.10	0.237	(0.462)	0.213	0.024
40	3.33	1.10	0.237	(0.462)	0.213	0.024
41	3.42	1.20	0.258	(0.462)	0.232	0.026
42	3.50	1.30	0.280	(0.462)	0.252	0.028
43	3.58	1.40	0.301	(0.462)	0.271	0.030
44	3.67	1.40	0.301	(0.462)	0.271	0.030
45	3.75	1.50	0.323	(0.462)	0.291	0.032
46	3.83	1.50	0.323	(0.462)	0.291	0.032
47	3.92	1.60	0.344	(0.462)	0.310	0.034
48	4.00	1.60	0.344	(0.462)	0.310	0.034
49	4.08	1.70	0.366	(0.462)	0.329	0.037
50	4.17	1.80	0.387	(0.462)	0.349	0.039
51	4.25	1.90	0.409	(0.462)	0.368	0.041
52	4.33	2.00	0.430	(0.462)	0.387	0.043
53	4.42	2.10	0.452	(0.462)	0.407	0.045
54	4.50	2.10	0.452	(0.462)	0.407	0.045
55	4.58	2.20	0.473	(0.462)	0.426	0.047
56	4.67	2.30	0.495	(0.462)	0.445	0.049
57	4.75	2.40	0.517	0.462	(0.465)	0.054
58	4.83	2.40	0.517	0.462	(0.465)	0.054
59	4.92	2.50	0.538	0.462	(0.484)	0.076
60	5.00	2.60	0.560	0.462	(0.504)	0.097
61	5.08	3.10	0.667	0.462	(0.600)	0.205
62	5.17	3.60	0.775	0.462	(0.697)	0.312
63	5.25	3.90	0.839	0.462	(0.755)	0.377
64	5.33	4.20	0.904	0.462	(0.814)	0.442
65	5.42	4.70	1.012	0.462	(0.910)	0.549
66	5.50	5.60	1.205	0.462	(1.085)	0.743
67	5.58	1.90	0.409	(0.462)	0.368	0.041
68	5.67	0.90	0.194	(0.462)	0.174	0.019
69	5.75	0.60	0.129	(0.462)	0.116	0.013
70	5.83	0.50	0.108	(0.462)	0.097	0.011
71	5.92	0.30	0.065	(0.462)	0.058	0.006
72	6.00	0.20	0.043	(0.462)	0.039	0.004

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.3

Flood volume = Effective rainfall 0.36(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 1.43(In)
Total soil loss = 4.710(Ac.Ft)
Total rainfall = 1.79(In)
Flood volume = 51348.9 Cubic Feet
Total soil loss = 205153.4 Cubic Feet

Peak flow rate of this hydrograph = 29.514(CFS)

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6 - 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	7.5	15.0	22.5	30.0

```
   0+ 5       0.0029      0.43  Q          |          |          |          |
   0+10       0.0065      0.51  Q          |          |          |          |
   0+15       0.0100      0.51  Q          |          |          |          |
   0+20       0.0135      0.51  Q          |          |          |          |
   0+25       0.0171      0.51  Q          |          |          |          |
   0+30       0.0212      0.60  Q          |          |          |          |
   0+35       0.0253      0.60  Q          |          |          |          |
   0+40       0.0294      0.60  Q          |          |          |          |
   0+45       0.0336      0.60  QV         |          |          |          |
   0+50       0.0377      0.60  QV         |          |          |          |
   0+55       0.0418      0.60  QV         |          |          |          |
   1+ 0       0.0465      0.68  QV         |          |          |          |
   1+ 5       0.0512      0.68  QV         |          |          |          |
   1+10       0.0559      0.68  QV         |          |          |          |
   1+15       0.0607      0.68  Q V        |          |          |          |
   1+20       0.0654      0.68  Q V        |          |          |          |
   1+25       0.0701      0.68  Q V        |          |          |          |
   1+30       0.0748      0.68  Q V        |          |          |          |
   1+35       0.0795      0.68  Q V        |          |          |          |
   1+40       0.0842      0.68  Q V        |          |          |          |
   1+45       0.0889      0.68  Q  V       |          |          |          |
   1+50       0.0936      0.68  Q  V       |          |          |          |
   1+55       0.0983      0.68  Q  V       |          |          |          |
   2+ 0       0.1036      0.77  |Q V       |          |          |          |
   2+ 5       0.1083      0.68  Q  V       |          |          |          |
   2+10       0.1136      0.77  |Q V       |          |          |          |
   2+15       0.1189      0.77  |Q  V      |          |          |          |
   2+20       0.1242      0.77  |Q  V      |          |          |          |
   2+25       0.1295      0.77  |Q  V      |          |          |          |
   2+30       0.1348      0.77  |Q  V      |          |          |          |
   2+35       0.1401      0.77  |Q  V      |          |          |          |
   2+40       0.1454      0.77  |Q  V      |          |          |          |
   2+45       0.1513      0.86  |Q   V     |          |          |          |
   2+50       0.1572      0.86  |Q   V     |          |          |          |
   2+55       0.1631      0.86  |Q   V     |          |          |          |
   3+ 0       0.1690      0.86  |Q   V     |          |          |          |
   3+ 5       0.1749      0.86  |Q   V     |          |          |          |
   3+10       0.1814      0.94  |Q    V    |          |          |          |
   3+15       0.1878      0.94  |Q    V    |          |          |          |
   3+20       0.1943      0.94  |Q    V    |          |          |          |
   3+25       0.2014      1.03  |Q    V    |          |          |          |
   3+30       0.2090      1.11  |Q     V   |          |          |          |
   3+35       0.2173      1.20  |Q     V   |          |          |          |
   3+40       0.2255      1.20  |Q     V   |          |          |          |
   3+45       0.2344      1.28  |Q     V   |          |          |          |
   3+50       0.2432      1.28  |Q      V  |          |          |          |
   3+55       0.2526      1.37  |Q      V  |          |          |          |
   4+ 0       0.2620      1.37  |Q      V  |          |          |          |
   4+ 5       0.2720      1.45  |Q       V |          |          |          |
   4+10       0.2826      1.54  | Q      V |          |          |          |
   4+15       0.2938      1.62  | Q      V |          |          |          |
   4+20       0.3056      1.71  | Q       V|          |          |          |
   4+25       0.3180      1.80  | Q       V|          |          |          |
   4+30       0.3303      1.80  | Q        V          |          |          |
   4+35       0.3433      1.88  | Q        V          |          |          |
   4+40       0.3568      1.97  | Q         V         |          |          |
   4+45       0.3717      2.15  | Q         V         |          |          |
   4+50       0.3865      2.15  | Q          V        |          |          |
   4+55       0.4072      3.01  |  Q         V        |          |          |
   5+ 0       0.4338      3.86  |   Q         V       |          |          |
   5+ 5       0.4899      8.14  |            Q     V   |          |          |
   5+10       0.5754     12.41  |            |     Q  V|          |          |
   5+15       0.6785     14.98  |            |        Q|  V       |          |
   5+20       0.7994     17.54  |            |         |  Q   V   |          |
   5+25       0.9496     21.82  |            |         |     Q  V |          |
   5+30       1.1529     29.51  |            |         |          |         Q|
   5+35       1.1641      1.62  | Q          |         |          |         V|
   5+40       1.1694      0.77  |Q           |         |          |         V|
   5+45       1.1729      0.51  Q            |         |          |         V|
   5+50       1.1759      0.43  Q            |         |          |         V|
   5+55       1.1776      0.26  Q            |         |          |         V|
   6+ 0       1.1788      0.17  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

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Study date 06/20/23 File: 2219E0122410.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.00	78.80

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	5.50	216.70

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 3.440(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 3.440(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	46.00	0.000
14.920	77.00	0.000
0.100	83.00	0.000

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
46.0	46.0	0.611	0.000	0.611	0.552	0.337
77.0	77.0	0.279	0.000	0.279	0.379	0.106
83.0	83.0	0.210	0.000	0.210	0.003	0.001
					Sum (F) =	0.462

Area averaged mean soil loss (F) (In/Hr) = 0.462
Minimum soil loss rate ((In/Hr)) = 0.231
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.028	(0.820)	0.025	0.003
2	0.17	0.07	0.028	(0.816)	0.025	0.003
3	0.25	0.07	0.028	(0.813)	0.025	0.003
4	0.33	0.10	0.041	(0.810)	0.037	0.004
5	0.42	0.10	0.041	(0.807)	0.037	0.004
6	0.50	0.10	0.041	(0.804)	0.037	0.004
7	0.58	0.10	0.041	(0.801)	0.037	0.004
8	0.67	0.10	0.041	(0.797)	0.037	0.004
9	0.75	0.10	0.041	(0.794)	0.037	0.004
10	0.83	0.13	0.055	(0.791)	0.050	0.006
11	0.92	0.13	0.055	(0.788)	0.050	0.006
12	1.00	0.13	0.055	(0.785)	0.050	0.006
13	1.08	0.10	0.041	(0.782)	0.037	0.004
14	1.17	0.10	0.041	(0.779)	0.037	0.004
15	1.25	0.10	0.041	(0.776)	0.037	0.004
16	1.33	0.10	0.041	(0.773)	0.037	0.004
17	1.42	0.10	0.041	(0.770)	0.037	0.004
18	1.50	0.10	0.041	(0.766)	0.037	0.004
19	1.58	0.10	0.041	(0.763)	0.037	0.004
20	1.67	0.10	0.041	(0.760)	0.037	0.004
21	1.75	0.10	0.041	(0.757)	0.037	0.004
22	1.83	0.13	0.055	(0.754)	0.050	0.006
23	1.92	0.13	0.055	(0.751)	0.050	0.006
24	2.00	0.13	0.055	(0.748)	0.050	0.006
25	2.08	0.13	0.055	(0.745)	0.050	0.006
26	2.17	0.13	0.055	(0.742)	0.050	0.006
27	2.25	0.13	0.055	(0.739)	0.050	0.006
28	2.33	0.13	0.055	(0.736)	0.050	0.006
29	2.42	0.13	0.055	(0.733)	0.050	0.006
30	2.50	0.13	0.055	(0.730)	0.050	0.006
31	2.58	0.17	0.069	(0.727)	0.062	0.007
32	2.67	0.17	0.069	(0.724)	0.062	0.007
33	2.75	0.17	0.069	(0.721)	0.062	0.007
34	2.83	0.17	0.069	(0.718)	0.062	0.007
35	2.92	0.17	0.069	(0.715)	0.062	0.007
36	3.00	0.17	0.069	(0.712)	0.062	0.007
37	3.08	0.17	0.069	(0.709)	0.062	0.007
38	3.17	0.17	0.069	(0.706)	0.062	0.007
39	3.25	0.17	0.069	(0.703)	0.062	0.007
40	3.33	0.17	0.069	(0.701)	0.062	0.007
41	3.42	0.17	0.069	(0.698)	0.062	0.007
42	3.50	0.17	0.069	(0.695)	0.062	0.007
43	3.58	0.17	0.069	(0.692)	0.062	0.007
44	3.67	0.17	0.069	(0.689)	0.062	0.007
45	3.75	0.17	0.069	(0.686)	0.062	0.007
46	3.83	0.20	0.083	(0.683)	0.074	0.008
47	3.92	0.20	0.083	(0.680)	0.074	0.008
48	4.00	0.20	0.083	(0.677)	0.074	0.008
49	4.08	0.20	0.083	(0.674)	0.074	0.008
50	4.17	0.20	0.083	(0.672)	0.074	0.008
51	4.25	0.20	0.083	(0.669)	0.074	0.008
52	4.33	0.23	0.096	(0.666)	0.087	0.010
53	4.42	0.23	0.096	(0.663)	0.087	0.010
54	4.50	0.23	0.096	(0.660)	0.087	0.010
55	4.58	0.23	0.096	(0.657)	0.087	0.010
56	4.67	0.23	0.096	(0.655)	0.087	0.010
57	4.75	0.23	0.096	(0.652)	0.087	0.010
58	4.83	0.27	0.110	(0.649)	0.099	0.011
59	4.92	0.27	0.110	(0.646)	0.099	0.011
60	5.00	0.27	0.110	(0.643)	0.099	0.011
61	5.08	0.20	0.083	(0.640)	0.074	0.008
62	5.17	0.20	0.083	(0.638)	0.074	0.008
63	5.25	0.20	0.083	(0.635)	0.074	0.008
64	5.33	0.23	0.096	(0.632)	0.087	0.010
65	5.42	0.23	0.096	(0.629)	0.087	0.010
66	5.50	0.23	0.096	(0.627)	0.087	0.010
67	5.58	0.27	0.110	(0.624)	0.099	0.011
68	5.67	0.27	0.110	(0.621)	0.099	0.011
69	5.75	0.27	0.110	(0.618)	0.099	0.011
70	5.83	0.27	0.110	(0.616)	0.099	0.011
71	5.92	0.27	0.110	(0.613)	0.099	0.011
72	6.00	0.27	0.110	(0.610)	0.099	0.011
73	6.08	0.30	0.124	(0.608)	0.111	0.012
74	6.17	0.30	0.124	(0.605)	0.111	0.012
75	6.25	0.30	0.124	(0.602)	0.111	0.012
76	6.33	0.30	0.124	(0.599)	0.111	0.012
77	6.42	0.30	0.124	(0.597)	0.111	0.012
78	6.50	0.30	0.124	(0.594)	0.111	0.012
79	6.58	0.33	0.138	(0.591)	0.124	0.014
80	6.67	0.33	0.138	(0.589)	0.124	0.014
81	6.75	0.33	0.138	(0.586)	0.124	0.014
82	6.83	0.33	0.138	(0.583)	0.124	0.014
83	6.92	0.33	0.138	(0.581)	0.124	0.014
84	7.00	0.33	0.138	(0.578)	0.124	0.014
85	7.08	0.33	0.138	(0.576)	0.124	0.014
86	7.17	0.33	0.138	(0.573)	0.124	0.014
87	7.25	0.33	0.138	(0.570)	0.124	0.014
88	7.33	0.37	0.151	(0.568)	0.136	0.015
89	7.42	0.37	0.151	(0.565)	0.136	0.015
90	7.50	0.37	0.151	(0.563)	0.136	0.015
91	7.58	0.40	0.165	(0.560)	0.149	0.017
92	7.67	0.40	0.165	(0.557)	0.149	0.017
93	7.75	0.40	0.165	(0.555)	0.149	0.017

94	7.83	0.43	0.179	(0.552)	0.161	0.018	
95	7.92	0.43	0.179	(0.550)	0.161	0.018	
96	8.00	0.43	0.179	(0.547)	0.161	0.018	
97	8.08	0.50	0.206	(0.545)	0.186	0.021	
98	8.17	0.50	0.206	(0.542)	0.186	0.021	
99	8.25	0.50	0.206	(0.540)	0.186	0.021	
100	8.33	0.50	0.206	(0.537)	0.186	0.021	
101	8.42	0.50	0.206	(0.534)	0.186	0.021	
102	8.50	0.50	0.206	(0.532)	0.186	0.021	
103	8.58	0.53	0.220	(0.529)	0.198	0.022	
104	8.67	0.53	0.220	(0.527)	0.198	0.022	
105	8.75	0.53	0.220	(0.525)	0.198	0.022	
106	8.83	0.57	0.234	(0.522)	0.211	0.023	
107	8.92	0.57	0.234	(0.520)	0.211	0.023	
108	9.00	0.57	0.234	(0.517)	0.211	0.023	
109	9.08	0.63	0.261	(0.515)	0.235	0.026	
110	9.17	0.63	0.261	(0.512)	0.235	0.026	
111	9.25	0.63	0.261	(0.510)	0.235	0.026	
112	9.33	0.67	0.275	(0.507)	0.248	0.028	
113	9.42	0.67	0.275	(0.505)	0.248	0.028	
114	9.50	0.67	0.275	(0.503)	0.248	0.028	
115	9.58	0.70	0.289	(0.500)	0.260	0.029	
116	9.67	0.70	0.289	(0.498)	0.260	0.029	
117	9.75	0.70	0.289	(0.495)	0.260	0.029	
118	9.83	0.73	0.303	(0.493)	0.272	0.030	
119	9.92	0.73	0.303	(0.491)	0.272	0.030	
120	10.00	0.73	0.303	(0.488)	0.272	0.030	
121	10.08	0.50	0.206	(0.486)	0.186	0.021	
122	10.17	0.50	0.206	(0.483)	0.186	0.021	
123	10.25	0.50	0.206	(0.481)	0.186	0.021	
124	10.33	0.50	0.206	(0.479)	0.186	0.021	
125	10.42	0.50	0.206	(0.476)	0.186	0.021	
126	10.50	0.50	0.206	(0.474)	0.186	0.021	
127	10.58	0.67	0.275	(0.472)	0.248	0.028	
128	10.67	0.67	0.275	(0.470)	0.248	0.028	
129	10.75	0.67	0.275	(0.467)	0.248	0.028	
130	10.83	0.67	0.275	(0.465)	0.248	0.028	
131	10.92	0.67	0.275	(0.463)	0.248	0.028	
132	11.00	0.67	0.275	(0.460)	0.248	0.028	
133	11.08	0.63	0.261	(0.458)	0.235	0.026	
134	11.17	0.63	0.261	(0.456)	0.235	0.026	
135	11.25	0.63	0.261	(0.454)	0.235	0.026	
136	11.33	0.63	0.261	(0.451)	0.235	0.026	
137	11.42	0.63	0.261	(0.449)	0.235	0.026	
138	11.50	0.63	0.261	(0.447)	0.235	0.026	
139	11.58	0.57	0.234	(0.445)	0.211	0.023	
140	11.67	0.57	0.234	(0.442)	0.211	0.023	
141	11.75	0.57	0.234	(0.440)	0.211	0.023	
142	11.83	0.60	0.248	(0.438)	0.223	0.025	
143	11.92	0.60	0.248	(0.436)	0.223	0.025	
144	12.00	0.60	0.248	(0.434)	0.223	0.025	
145	12.08	0.83	0.344	(0.432)	0.310	0.034	
146	12.17	0.83	0.344	(0.429)	0.310	0.034	
147	12.25	0.83	0.344	(0.427)	0.310	0.034	
148	12.33	0.87	0.358	(0.425)	0.322	0.036	
149	12.42	0.87	0.358	(0.423)	0.322	0.036	
150	12.50	0.87	0.358	(0.421)	0.322	0.036	
151	12.58	0.93	0.385	(0.419)	0.347	0.039	
152	12.67	0.93	0.385	(0.417)	0.347	0.039	
153	12.75	0.93	0.385	(0.415)	0.347	0.039	
154	12.83	0.97	0.399	(0.412)	0.359	0.040	
155	12.92	0.97	0.399	(0.410)	0.359	0.040	
156	13.00	0.97	0.399	(0.408)	0.359	0.040	
157	13.08	1.13	0.468	0.406	(0.421)	0.062	
158	13.17	1.13	0.468	0.404	(0.421)	0.064	
159	13.25	1.13	0.468	0.402	(0.421)	0.066	
160	13.33	1.13	0.468	0.400	(0.421)	0.068	
161	13.42	1.13	0.468	0.398	(0.421)	0.070	
162	13.50	1.13	0.468	0.396	(0.421)	0.072	
163	13.58	0.77	0.316	(0.394)	0.285	0.032	
164	13.67	0.77	0.316	(0.392)	0.285	0.032	
165	13.75	0.77	0.316	(0.390)	0.285	0.032	
166	13.83	0.77	0.316	(0.388)	0.285	0.032	
167	13.92	0.77	0.316	(0.386)	0.285	0.032	
168	14.00	0.77	0.316	(0.384)	0.285	0.032	
169	14.08	0.90	0.371	(0.382)	0.334	0.037	
170	14.17	0.90	0.371	(0.380)	0.334	0.037	
171	14.25	0.90	0.371	(0.378)	0.334	0.037	
172	14.33	0.87	0.358	(0.376)	0.322	0.036	
173	14.42	0.87	0.358	(0.374)	0.322	0.036	
174	14.50	0.87	0.358	(0.372)	0.322	0.036	
175	14.58	0.87	0.358	(0.370)	0.322	0.036	
176	14.67	0.87	0.358	(0.369)	0.322	0.036	
177	14.75	0.87	0.358	(0.367)	0.322	0.036	
178	14.83	0.83	0.344	(0.365)	0.310	0.034	
179	14.92	0.83	0.344	(0.363)	0.310	0.034	
180	15.00	0.83	0.344	(0.361)	0.310	0.034	
181	15.08	0.80	0.330	(0.359)	0.297	0.033	
182	15.17	0.80	0.330	(0.357)	0.297	0.033	
183	15.25	0.80	0.330	(0.356)	0.297	0.033	
184	15.33	0.77	0.316	(0.354)	0.285	0.032	
185	15.42	0.77	0.316	(0.352)	0.285	0.032	
186	15.50	0.77	0.316	(0.350)	0.285	0.032	
187	15.58	0.63	0.261	(0.348)	0.235	0.026	
188	15.67	0.63	0.261	(0.347)	0.235	0.026	
189	15.75	0.63	0.261	(0.345)	0.235	0.026	
190	15.83	0.63	0.261	(0.343)	0.235	0.026	

191	15.92	0.63	0.261	(0.341)	0.235	0.026
192	16.00	0.63	0.261	(0.339)	0.235	0.026
193	16.08	0.13	0.055	(0.338)	0.050	0.006
194	16.17	0.13	0.055	(0.336)	0.050	0.006
195	16.25	0.13	0.055	(0.334)	0.050	0.006
196	16.33	0.13	0.055	(0.333)	0.050	0.006
197	16.42	0.13	0.055	(0.331)	0.050	0.006
198	16.50	0.13	0.055	(0.329)	0.050	0.006
199	16.58	0.10	0.041	(0.328)	0.037	0.004
200	16.67	0.10	0.041	(0.326)	0.037	0.004
201	16.75	0.10	0.041	(0.324)	0.037	0.004
202	16.83	0.10	0.041	(0.323)	0.037	0.004
203	16.92	0.10	0.041	(0.321)	0.037	0.004
204	17.00	0.10	0.041	(0.319)	0.037	0.004
205	17.08	0.17	0.069	(0.318)	0.062	0.007
206	17.17	0.17	0.069	(0.316)	0.062	0.007
207	17.25	0.17	0.069	(0.315)	0.062	0.007
208	17.33	0.17	0.069	(0.313)	0.062	0.007
209	17.42	0.17	0.069	(0.311)	0.062	0.007
210	17.50	0.17	0.069	(0.310)	0.062	0.007
211	17.58	0.17	0.069	(0.308)	0.062	0.007
212	17.67	0.17	0.069	(0.307)	0.062	0.007
213	17.75	0.17	0.069	(0.305)	0.062	0.007
214	17.83	0.13	0.055	(0.304)	0.050	0.006
215	17.92	0.13	0.055	(0.302)	0.050	0.006
216	18.00	0.13	0.055	(0.301)	0.050	0.006
217	18.08	0.13	0.055	(0.299)	0.050	0.006
218	18.17	0.13	0.055	(0.298)	0.050	0.006
219	18.25	0.13	0.055	(0.296)	0.050	0.006
220	18.33	0.13	0.055	(0.295)	0.050	0.006
221	18.42	0.13	0.055	(0.293)	0.050	0.006
222	18.50	0.13	0.055	(0.292)	0.050	0.006
223	18.58	0.10	0.041	(0.291)	0.037	0.004
224	18.67	0.10	0.041	(0.289)	0.037	0.004
225	18.75	0.10	0.041	(0.288)	0.037	0.004
226	18.83	0.07	0.028	(0.286)	0.025	0.003
227	18.92	0.07	0.028	(0.285)	0.025	0.003
228	19.00	0.07	0.028	(0.284)	0.025	0.003
229	19.08	0.10	0.041	(0.282)	0.037	0.004
230	19.17	0.10	0.041	(0.281)	0.037	0.004
231	19.25	0.10	0.041	(0.280)	0.037	0.004
232	19.33	0.13	0.055	(0.278)	0.050	0.006
233	19.42	0.13	0.055	(0.277)	0.050	0.006
234	19.50	0.13	0.055	(0.276)	0.050	0.006
235	19.58	0.10	0.041	(0.275)	0.037	0.004
236	19.67	0.10	0.041	(0.273)	0.037	0.004
237	19.75	0.10	0.041	(0.272)	0.037	0.004
238	19.83	0.07	0.028	(0.271)	0.025	0.003
239	19.92	0.07	0.028	(0.270)	0.025	0.003
240	20.00	0.07	0.028	(0.268)	0.025	0.003
241	20.08	0.10	0.041	(0.267)	0.037	0.004
242	20.17	0.10	0.041	(0.266)	0.037	0.004
243	20.25	0.10	0.041	(0.265)	0.037	0.004
244	20.33	0.10	0.041	(0.264)	0.037	0.004
245	20.42	0.10	0.041	(0.263)	0.037	0.004
246	20.50	0.10	0.041	(0.262)	0.037	0.004
247	20.58	0.10	0.041	(0.260)	0.037	0.004
248	20.67	0.10	0.041	(0.259)	0.037	0.004
249	20.75	0.10	0.041	(0.258)	0.037	0.004
250	20.83	0.07	0.028	(0.257)	0.025	0.003
251	20.92	0.07	0.028	(0.256)	0.025	0.003
252	21.00	0.07	0.028	(0.255)	0.025	0.003
253	21.08	0.10	0.041	(0.254)	0.037	0.004
254	21.17	0.10	0.041	(0.253)	0.037	0.004
255	21.25	0.10	0.041	(0.252)	0.037	0.004
256	21.33	0.07	0.028	(0.251)	0.025	0.003
257	21.42	0.07	0.028	(0.250)	0.025	0.003
258	21.50	0.07	0.028	(0.249)	0.025	0.003
259	21.58	0.10	0.041	(0.248)	0.037	0.004
260	21.67	0.10	0.041	(0.248)	0.037	0.004
261	21.75	0.10	0.041	(0.247)	0.037	0.004
262	21.83	0.07	0.028	(0.246)	0.025	0.003
263	21.92	0.07	0.028	(0.245)	0.025	0.003
264	22.00	0.07	0.028	(0.244)	0.025	0.003
265	22.08	0.10	0.041	(0.243)	0.037	0.004
266	22.17	0.10	0.041	(0.242)	0.037	0.004
267	22.25	0.10	0.041	(0.242)	0.037	0.004
268	22.33	0.07	0.028	(0.241)	0.025	0.003
269	22.42	0.07	0.028	(0.240)	0.025	0.003
270	22.50	0.07	0.028	(0.240)	0.025	0.003
271	22.58	0.07	0.028	(0.239)	0.025	0.003
272	22.67	0.07	0.028	(0.238)	0.025	0.003
273	22.75	0.07	0.028	(0.238)	0.025	0.003
274	22.83	0.07	0.028	(0.237)	0.025	0.003
275	22.92	0.07	0.028	(0.236)	0.025	0.003
276	23.00	0.07	0.028	(0.236)	0.025	0.003
277	23.08	0.07	0.028	(0.235)	0.025	0.003
278	23.17	0.07	0.028	(0.235)	0.025	0.003
279	23.25	0.07	0.028	(0.234)	0.025	0.003
280	23.33	0.07	0.028	(0.234)	0.025	0.003
281	23.42	0.07	0.028	(0.233)	0.025	0.003
282	23.50	0.07	0.028	(0.233)	0.025	0.003
283	23.58	0.07	0.028	(0.232)	0.025	0.003
284	23.67	0.07	0.028	(0.232)	0.025	0.003
285	23.75	0.07	0.028	(0.232)	0.025	0.003
286	23.83	0.07	0.028	(0.232)	0.025	0.003
287	23.92	0.07	0.028	(0.231)	0.025	0.003

288 24.00 0.07 0.028 (0.231) 0.025 0.003
(Loss Rate Not Used)
Sum = 100.0 Sum = 4.2
Flood volume = Effective rainfall 0.35(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 1.2(Ac.Ft)
Total soil loss = 3.09(In)
Total soil loss = 10.131(Ac.Ft)
Total rainfall = 3.44(In)
Flood volume = 50621.7 Cubic Feet
Total soil loss = 441325.9 Cubic Feet

Peak flow rate of this hydrograph = 2.853(CFS)

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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	2.5	5.0	7.5	10.0
0+ 5	0.0008	0.11	Q				
0+10	0.0015	0.11	Q				
0+15	0.0023	0.11	Q				
0+20	0.0034	0.16	Q				
0+25	0.0045	0.16	Q				
0+30	0.0056	0.16	Q				
0+35	0.0068	0.16	Q				
0+40	0.0079	0.16	Q				
0+45	0.0090	0.16	Q				
0+50	0.0105	0.22	Q				
0+55	0.0120	0.22	Q				
1+ 0	0.0136	0.22	Q				
1+ 5	0.0147	0.16	Q				
1+10	0.0158	0.16	Q				
1+15	0.0169	0.16	Q				
1+20	0.0181	0.16	Q				
1+25	0.0192	0.16	Q				
1+30	0.0203	0.16	Q				
1+35	0.0215	0.16	Q				
1+40	0.0226	0.16	Q				
1+45	0.0237	0.16	Q				
1+50	0.0252	0.22	Q				
1+55	0.0267	0.22	Q				
2+ 0	0.0282	0.22	Q				
2+ 5	0.0297	0.22	QV				
2+10	0.0312	0.22	QV				
2+15	0.0328	0.22	QV				
2+20	0.0343	0.22	QV				
2+25	0.0358	0.22	QV				
2+30	0.0373	0.22	QV				
2+35	0.0392	0.27	Q				
2+40	0.0410	0.27	Q				
2+45	0.0429	0.27	Q				
2+50	0.0448	0.27	Q				
2+55	0.0467	0.27	Q				
3+ 0	0.0486	0.27	Q				
3+ 5	0.0504	0.27	Q				
3+10	0.0523	0.27	Q				
3+15	0.0542	0.27	Q				
3+20	0.0561	0.27	Q				
3+25	0.0580	0.27	Q				
3+30	0.0599	0.27	QV				
3+35	0.0617	0.27	QV				
3+40	0.0636	0.27	QV				
3+45	0.0655	0.27	QV				
3+50	0.0678	0.33	QV				
3+55	0.0700	0.33	QV				
4+ 0	0.0723	0.33	QV				
4+ 5	0.0745	0.33	QV				
4+10	0.0768	0.33	QV				
4+15	0.0791	0.33	QV				
4+20	0.0817	0.38	QV				
4+25	0.0843	0.38	QV				
4+30	0.0870	0.38	QV				
4+35	0.0896	0.38	Q V				
4+40	0.0922	0.38	Q V				
4+45	0.0949	0.38	Q V				
4+50	0.0979	0.44	Q V				
4+55	0.1009	0.44	Q V				
5+ 0	0.1039	0.44	Q V				
5+ 5	0.1062	0.33	Q V				
5+10	0.1084	0.33	Q V				
5+15	0.1107	0.33	Q V				
5+20	0.1133	0.38	Q V				
5+25	0.1159	0.38	Q V				
5+30	0.1186	0.38	Q V				
5+35	0.1216	0.44	Q V				
5+40	0.1246	0.44	Q V				
5+45	0.1276	0.44	Q V				
5+50	0.1306	0.44	Q V				
5+55	0.1336	0.44	Q V				
6+ 0	0.1367	0.44	Q V				
6+ 5	0.1400	0.49	Q V				
6+10	0.1434	0.49	Q V				
6+15	0.1468	0.49	Q V				

6+20	0.1502	0.49	
6+25	0.1536	0.49	
6+30	0.1570	0.49	
6+35	0.1607	0.55	
6+40	0.1645	0.55	
6+45	0.1683	0.55	
6+50	0.1720	0.55	
6+55	0.1758	0.55	
7+ 0	0.1796	0.55	
7+ 5	0.1833	0.55	
7+10	0.1871	0.55	
7+15	0.1909	0.55	
7+20	0.1950	0.60	
7+25	0.1991	0.60	
7+30	0.2033	0.60	
7+35	0.2078	0.66	
7+40	0.2123	0.66	
7+45	0.2168	0.66	
7+50	0.2217	0.71	
7+55	0.2266	0.71	
8+ 0	0.2315	0.71	
8+ 5	0.2372	0.82	
8+10	0.2428	0.82	
8+15	0.2485	0.82	
8+20	0.2541	0.82	
8+25	0.2598	0.82	
8+30	0.2654	0.82	
8+35	0.2714	0.87	
8+40	0.2774	0.87	
8+45	0.2835	0.87	
8+50	0.2899	0.93	
8+55	0.2963	0.93	
9+ 0	0.3027	0.93	
9+ 5	0.3098	1.04	
9+10	0.3170	1.04	
9+15	0.3241	1.04	
9+20	0.3317	1.09	
9+25	0.3392	1.09	
9+30	0.3467	1.09	
9+35	0.3546	1.15	
9+40	0.3625	1.15	
9+45	0.3704	1.15	
9+50	0.3787	1.20	
9+55	0.3870	1.20	
10+ 0	0.3953	1.20	
10+ 5	0.4009	0.82	
10+10	0.4066	0.82	
10+15	0.4122	0.82	
10+20	0.4179	0.82	
10+25	0.4235	0.82	
10+30	0.4292	0.82	
10+35	0.4367	1.09	
10+40	0.4442	1.09	
10+45	0.4517	1.09	
10+50	0.4593	1.09	
10+55	0.4668	1.09	
11+ 0	0.4743	1.09	
11+ 5	0.4815	1.04	
11+10	0.4886	1.04	
11+15	0.4958	1.04	
11+20	0.5029	1.04	
11+25	0.5101	1.04	
11+30	0.5172	1.04	
11+35	0.5236	0.93	
11+40	0.5300	0.93	
11+45	0.5364	0.93	
11+50	0.5432	0.98	
11+55	0.5500	0.98	
12+ 0	0.5568	0.98	
12+ 5	0.5662	1.37	
12+10	0.5756	1.37	
12+15	0.5850	1.37	
12+20	0.5948	1.42	
12+25	0.6046	1.42	
12+30	0.6144	1.42	
12+35	0.6249	1.53	
12+40	0.6355	1.53	
12+45	0.6460	1.53	
12+50	0.6569	1.59	
12+55	0.6678	1.59	
13+ 0	0.6787	1.59	
13+ 5	0.6956	2.45	
13+10	0.7130	2.53	
13+15	0.7310	2.61	
13+20	0.7495	2.69	
13+25	0.7686	2.77	
13+30	0.7883	2.85	
13+35	0.7970	1.26	
13+40	0.8056	1.26	
13+45	0.8143	1.26	
13+50	0.8229	1.26	
13+55	0.8316	1.26	
14+ 0	0.8402	1.26	
14+ 5	0.8504	1.48	
14+10	0.8606	1.48	
14+15	0.8707	1.48	
14+20	0.8805	1.42	

14+25	0.8903	1.42	Q			V	
14+30	0.9001	1.42	Q			V	
14+35	0.9099	1.42	Q			V	
14+40	0.9197	1.42	Q			V	
14+45	0.9295	1.42	Q			V	
14+50	0.9389	1.37	Q			V	
14+55	0.9483	1.37	Q			V	
15+ 0	0.9577	1.37	Q			V	
15+ 5	0.9667	1.31	Q			V	
15+10	0.9758	1.31	Q			V	
15+15	0.9848	1.31	Q			V	
15+20	0.9935	1.26	Q			V	
15+25	1.0021	1.26	Q			V	
15+30	1.0108	1.26	Q			V	
15+35	1.0179	1.04	Q			V	
15+40	1.0251	1.04	Q			V	
15+45	1.0322	1.04	Q			V	
15+50	1.0394	1.04	Q			V	
15+55	1.0465	1.04	Q			V	
16+ 0	1.0537	1.04	Q			V	
16+ 5	1.0552	0.22	Q			V	
16+10	1.0567	0.22	Q			V	
16+15	1.0582	0.22	Q			V	
16+20	1.0597	0.22	Q			V	
16+25	1.0612	0.22	Q			V	
16+30	1.0627	0.22	Q			V	
16+35	1.0639	0.16	Q			V	
16+40	1.0650	0.16	Q			V	
16+45	1.0661	0.16	Q			V	
16+50	1.0672	0.16	Q			V	
16+55	1.0684	0.16	Q			V	
17+ 0	1.0695	0.16	Q			V	
17+ 5	1.0714	0.27	Q			V	
17+10	1.0733	0.27	Q			V	
17+15	1.0752	0.27	Q			V	
17+20	1.0770	0.27	Q			V	
17+25	1.0789	0.27	Q			V	
17+30	1.0808	0.27	Q			V	
17+35	1.0827	0.27	Q			V	
17+40	1.0846	0.27	Q			V	
17+45	1.0864	0.27	Q			V	
17+50	1.0880	0.22	Q			V	
17+55	1.0895	0.22	Q			V	
18+ 0	1.0910	0.22	Q			V	
18+ 5	1.0925	0.22	Q			V	
18+10	1.0940	0.22	Q			V	
18+15	1.0955	0.22	Q			V	
18+20	1.0970	0.22	Q			V	
18+25	1.0985	0.22	Q			V	
18+30	1.1000	0.22	Q			V	
18+35	1.1011	0.16	Q			V	
18+40	1.1023	0.16	Q			V	
18+45	1.1034	0.16	Q			V	
18+50	1.1041	0.11	Q			V	
18+55	1.1049	0.11	Q			V	
19+ 0	1.1056	0.11	Q			V	
19+ 5	1.1068	0.16	Q			V	
19+10	1.1079	0.16	Q			V	
19+15	1.1090	0.16	Q			V	
19+20	1.1105	0.22	Q			V	
19+25	1.1120	0.22	Q			V	
19+30	1.1136	0.22	Q			V	
19+35	1.1147	0.16	Q			V	
19+40	1.1158	0.16	Q			V	
19+45	1.1169	0.16	Q			V	
19+50	1.1177	0.11	Q			V	
19+55	1.1184	0.11	Q			V	
20+ 0	1.1192	0.11	Q			V	
20+ 5	1.1203	0.16	Q			V	
20+10	1.1215	0.16	Q			V	
20+15	1.1226	0.16	Q			V	
20+20	1.1237	0.16	Q			V	
20+25	1.1248	0.16	Q			V	
20+30	1.1260	0.16	Q			V	
20+35	1.1271	0.16	Q			V	
20+40	1.1282	0.16	Q			V	
20+45	1.1294	0.16	Q			V	
20+50	1.1301	0.11	Q			V	
20+55	1.1309	0.11	Q			V	
21+ 0	1.1316	0.11	Q			V	
21+ 5	1.1328	0.16	Q			V	
21+10	1.1339	0.16	Q			V	
21+15	1.1350	0.16	Q			V	
21+20	1.1358	0.11	Q			V	
21+25	1.1365	0.11	Q			V	
21+30	1.1373	0.11	Q			V	
21+35	1.1384	0.16	Q			V	
21+40	1.1395	0.16	Q			V	
21+45	1.1407	0.16	Q			V	
21+50	1.1414	0.11	Q			V	
21+55	1.1422	0.11	Q			V	
22+ 0	1.1429	0.11	Q			V	
22+ 5	1.1440	0.16	Q			V	
22+10	1.1452	0.16	Q			V	
22+15	1.1463	0.16	Q			V	
22+20	1.1471	0.11	Q			V	
22+25	1.1478	0.11	Q			V	

22+30	1.1486	0.11	Q				V
22+35	1.1493	0.11	Q				V
22+40	1.1501	0.11	Q				V
22+45	1.1508	0.11	Q				V
22+50	1.1516	0.11	Q				V
22+55	1.1523	0.11	Q				V
23+ 0	1.1531	0.11	Q				V
23+ 5	1.1538	0.11	Q				V
23+10	1.1546	0.11	Q				V
23+15	1.1553	0.11	Q				V
23+20	1.1561	0.11	Q				V
23+25	1.1568	0.11	Q				V
23+30	1.1576	0.11	Q				V
23+35	1.1583	0.11	Q				V
23+40	1.1591	0.11	Q				V
23+45	1.1599	0.11	Q				V
23+50	1.1606	0.11	Q				V
23+55	1.1614	0.11	Q				V
24+ 0	1.1621	0.11	Q				V

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

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Study date 06/20/23 File: 2219E034110.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.52	12.42

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.15	27.47

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 0.779(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 0.779(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	46.00	0.000
1.480	77.00	0.000
5.160	83.00	0.000

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
46.0	46.0	0.611	0.000	0.611	0.616	0.377
77.0	77.0	0.279	0.000	0.279	0.062	0.017
83.0	83.0	0.210	0.000	0.210	0.216	0.045
					Sum (F) =	0.486

Area averaged mean soil loss (F) (In/Hr) = 0.486
Minimum soil loss rate ((In/Hr)) = 0.243
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

```
          1   0.083          1.#IO        100.000             24.077
                                     Sum = 100.000   Sum=      24.077
-----------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value

  Unit Time   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
   1   0.08     4.10      0.383       (  0.486)       0.345        0.038
   2   0.17     4.60      0.430       (  0.486)       0.387        0.043
   3   0.25     4.50      0.421       (  0.486)       0.379        0.042
   4   0.33     4.90      0.458       (  0.486)       0.412        0.046
   5   0.42     5.50      0.514       (  0.486)       0.463        0.051
   6   0.50     6.40      0.598          0.486    (  0.538)        0.112
   7   0.58     7.10      0.664          0.486    (  0.597)        0.178
   8   0.67     9.00      0.841          0.486    (  0.757)        0.355
   9   0.75    12.90      1.206          0.486    (  1.085)        0.720
  10   0.83    29.50      2.758          0.486    (  2.482)        2.272
  11   0.92     7.00      0.654          0.486    (  0.589)        0.168
  12   1.00     4.50      0.421       (  0.486)       0.379        0.042
                 (Loss Rate Not Used)
     Sum =     100.0                                  Sum =     4.1
        Flood volume = Effective rainfall      0.34(In)
         times area      23.9(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
        Total soil loss =      0.44(In)
        Total soil loss =     0.876(Ac.Ft)
        Total rainfall =      0.78(In)
        Flood volume =       29403.0 Cubic Feet
        Total soil loss =       38154.0 Cubic Feet
        ---------------------------------------------------------------------
         Peak flow rate of this hydrograph =     54.726(CFS)
        ---------------------------------------------------------------------
        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           1 - 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       15.0      30.0      45.0      60.0
  ---------------------------------------------------------------------
    0+ 5       0.0064      0.92  Q         |         |         |         |
    0+10       0.0135      1.04  Q         |         |         |         |
    0+15       0.0205      1.01  QV        |         |         |         |
    0+20       0.0281      1.10  QV        |         |         |         |
    0+25       0.0366      1.24  Q V       |         |         |         |
    0+30       0.0552      2.71  |Q V      |         |         |         |
    0+35       0.0847      4.28  | Q  V    |         |         |         |
    0+40       0.1437      8.56  |    Q  V |         |         |         |
    0+45       0.2632     17.34  |         |Q   V    |         |         |
    0+50       0.6401     54.73  |         |         |         |     QV  |
    0+55       0.6680      4.06  | Q       |         |         |        V|
    1+ 0       0.6750      1.01  Q         |         |         |         V
-----------------------------------------------------------------------
```

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

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Study date 06/20/23 File: 2219E034310.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.95	22.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.90	45.39

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.341(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.341(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	46.00	0.000
1.480	77.00	0.000
5.160	83.00	0.000

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
46.0	46.0	0.611	0.000	0.611	0.616	0.377
77.0	77.0	0.279	0.000	0.279	0.062	0.017
83.0	83.0	0.210	0.000	0.210	0.216	0.045
					Sum (F) =	0.486

Area averaged mean soil loss (F) (In/Hr) = 0.486
Minimum soil loss rate ((In/Hr)) = 0.243
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.209	(0.486)	0.188	0.021
2	0.17	1.30	0.209	(0.486)	0.188	0.021
3	0.25	1.10	0.177	(0.486)	0.159	0.018
4	0.33	1.50	0.241	(0.486)	0.217	0.024
5	0.42	1.50	0.241	(0.486)	0.217	0.024
6	0.50	1.80	0.290	(0.486)	0.261	0.029
7	0.58	1.50	0.241	(0.486)	0.217	0.024
8	0.67	1.80	0.290	(0.486)	0.261	0.029
9	0.75	1.80	0.290	(0.486)	0.261	0.029
10	0.83	1.50	0.241	(0.486)	0.217	0.024
11	0.92	1.60	0.257	(0.486)	0.232	0.026
12	1.00	1.80	0.290	(0.486)	0.261	0.029
13	1.08	2.20	0.354	(0.486)	0.319	0.035
14	1.17	2.20	0.354	(0.486)	0.319	0.035
15	1.25	2.20	0.354	(0.486)	0.319	0.035
16	1.33	2.00	0.322	(0.486)	0.290	0.032
17	1.42	2.60	0.418	(0.486)	0.376	0.042
18	1.50	2.70	0.434	(0.486)	0.391	0.043
19	1.58	2.40	0.386	(0.486)	0.348	0.039
20	1.67	2.70	0.434	(0.486)	0.391	0.043
21	1.75	3.30	0.531	(0.486)	0.478	0.053
22	1.83	3.10	0.499	(0.486)	0.449	0.050
23	1.92	2.90	0.467	(0.486)	0.420	0.047
24	2.00	3.00	0.483	(0.486)	0.434	0.048
25	2.08	3.10	0.499	(0.486)	0.449	0.050
26	2.17	4.20	0.676	0.486	(0.608)	0.190
27	2.25	5.00	0.804	0.486	(0.724)	0.319
28	2.33	3.50	0.563	0.486	(0.507)	0.077
29	2.42	6.80	1.094	0.486	(0.985)	0.608
30	2.50	7.30	1.174	0.486	(1.057)	0.689
31	2.58	8.20	1.319	0.486	(1.187)	0.833
32	2.67	5.90	0.949	0.486	(0.854)	0.463
33	2.75	2.00	0.322	(0.486)	0.290	0.032
34	2.83	1.80	0.290	(0.486)	0.261	0.029
35	2.92	1.80	0.290	(0.486)	0.261	0.029
36	3.00	0.60	0.097	(0.486)	0.087	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.1

Flood volume = Effective rainfall 0.34(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 1.00(In)
Total soil loss = 1.984(Ac.Ft)
Total rainfall = 1.34(In)
Flood volume = 29843.9 Cubic Feet
Total soil loss = 86422.4 Cubic Feet

Peak flow rate of this hydrograph = 20.075(CFS)

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3 - 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 7.5 15.0 22.5 30.0
0+ 5	0.0035	0.50	Q
0+10	0.0069	0.50	Q
0+15	0.0099	0.43	Q
0+20	0.0139	0.58	Q
0+25	0.0179	0.58	QV
0+30	0.0227	0.70	QV
0+35	0.0267	0.58	QV
0+40	0.0315	0.70	QV
0+45	0.0363	0.70	Q V
0+50	0.0403	0.58	Q V
0+55	0.0446	0.62	Q V
1+ 0	0.0494	0.70	Q V
1+ 5	0.0553	0.85	Q V
1+10	0.0611	0.85	Q V
1+15	0.0670	0.85	Q V
1+20	0.0723	0.78	Q V
1+25	0.0793	1.01	Q V
1+30	0.0865	1.05	Q V
1+35	0.0929	0.93	Q V
1+40	0.1001	1.05	Q V
1+45	0.1089	1.28	Q V
1+50	0.1172	1.20	Q V
1+55	0.1249	1.12	Q V
2+ 0	0.1329	1.16	Q V
2+ 5	0.1412	1.20	Q V
2+10	0.1727	4.57	Q V
2+15	0.2255	7.67	Q V
2+20	0.2383	1.86	Q V
2+25	0.3392	14.65	Q
2+30	0.4535	16.59	Q V
2+35	0.5917	20.07	Q V
2+40	0.6686	11.16	Q V

```
    2+45       0.6739      0.78  |Q        |         |         |        V|
    2+50       0.6787      0.70  Q         |         |         |        V|
    2+55       0.6835      0.70  Q         |         |         |        V|
    3+ 0       0.6851      0.23  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

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Study date 06/20/23 File: 2219E034610.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.30	31.06

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.50	59.73

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.794(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.794(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	46.00	0.000
1.480	77.00	0.000
5.160	83.00	0.000

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
46.0	46.0	0.611	0.000	0.611	0.616	0.377
77.0	77.0	0.279	0.000	0.279	0.062	0.017
83.0	83.0	0.210	0.000	0.210	0.216	0.045
					Sum (F) =	0.486

Area averaged mean soil loss (F) (In/Hr) = 0.486
Minimum soil loss rate ((In/Hr)) = 0.243
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.108	(0.486)	0.097	0.011
2	0.17	0.60	0.129	(0.486)	0.116	0.013
3	0.25	0.60	0.129	(0.486)	0.116	0.013
4	0.33	0.60	0.129	(0.486)	0.116	0.013
5	0.42	0.60	0.129	(0.486)	0.116	0.013
6	0.50	0.70	0.151	(0.486)	0.136	0.015
7	0.58	0.70	0.151	(0.486)	0.136	0.015
8	0.67	0.70	0.151	(0.486)	0.136	0.015
9	0.75	0.70	0.151	(0.486)	0.136	0.015
10	0.83	0.70	0.151	(0.486)	0.136	0.015
11	0.92	0.70	0.151	(0.486)	0.136	0.015
12	1.00	0.80	0.172	(0.486)	0.155	0.017
13	1.08	0.80	0.172	(0.486)	0.155	0.017
14	1.17	0.80	0.172	(0.486)	0.155	0.017
15	1.25	0.80	0.172	(0.486)	0.155	0.017
16	1.33	0.80	0.172	(0.486)	0.155	0.017
17	1.42	0.80	0.172	(0.486)	0.155	0.017
18	1.50	0.80	0.172	(0.486)	0.155	0.017
19	1.58	0.80	0.172	(0.486)	0.155	0.017
20	1.67	0.80	0.172	(0.486)	0.155	0.017
21	1.75	0.80	0.172	(0.486)	0.155	0.017
22	1.83	0.80	0.172	(0.486)	0.155	0.017
23	1.92	0.80	0.172	(0.486)	0.155	0.017
24	2.00	0.90	0.194	(0.486)	0.174	0.019
25	2.08	0.80	0.172	(0.486)	0.155	0.017
26	2.17	0.90	0.194	(0.486)	0.174	0.019
27	2.25	0.90	0.194	(0.486)	0.174	0.019
28	2.33	0.90	0.194	(0.486)	0.174	0.019
29	2.42	0.90	0.194	(0.486)	0.174	0.019
30	2.50	0.90	0.194	(0.486)	0.174	0.019
31	2.58	0.90	0.194	(0.486)	0.174	0.019
32	2.67	0.90	0.194	(0.486)	0.174	0.019
33	2.75	1.00	0.215	(0.486)	0.194	0.022
34	2.83	1.00	0.215	(0.486)	0.194	0.022
35	2.92	1.00	0.215	(0.486)	0.194	0.022
36	3.00	1.00	0.215	(0.486)	0.194	0.022
37	3.08	1.00	0.215	(0.486)	0.194	0.022
38	3.17	1.10	0.237	(0.486)	0.213	0.024
39	3.25	1.10	0.237	(0.486)	0.213	0.024
40	3.33	1.10	0.237	(0.486)	0.213	0.024
41	3.42	1.20	0.258	(0.486)	0.232	0.026
42	3.50	1.30	0.280	(0.486)	0.252	0.028
43	3.58	1.40	0.301	(0.486)	0.271	0.030
44	3.67	1.40	0.301	(0.486)	0.271	0.030
45	3.75	1.50	0.323	(0.486)	0.291	0.032
46	3.83	1.50	0.323	(0.486)	0.291	0.032
47	3.92	1.60	0.344	(0.486)	0.310	0.034
48	4.00	1.60	0.344	(0.486)	0.310	0.034
49	4.08	1.70	0.366	(0.486)	0.329	0.037
50	4.17	1.80	0.387	(0.486)	0.349	0.039
51	4.25	1.90	0.409	(0.486)	0.368	0.041
52	4.33	2.00	0.430	(0.486)	0.387	0.043
53	4.42	2.10	0.452	(0.486)	0.407	0.045
54	4.50	2.10	0.452	(0.486)	0.407	0.045
55	4.58	2.20	0.473	(0.486)	0.426	0.047
56	4.67	2.30	0.495	(0.486)	0.446	0.050
57	4.75	2.40	0.517	(0.486)	0.465	0.052
58	4.83	2.40	0.517	(0.486)	0.465	0.052
59	4.92	2.50	0.538	(0.486)	0.484	0.054
60	5.00	2.60	0.560	0.486	(0.504)	0.074
61	5.08	3.10	0.667	0.486	(0.600)	0.181
62	5.17	3.60	0.775	0.486	(0.697)	0.289
63	5.25	3.90	0.839	0.486	(0.755)	0.353
64	5.33	4.20	0.904	0.486	(0.814)	0.418
65	5.42	4.70	1.012	0.486	(0.910)	0.526
66	5.50	5.60	1.205	0.486	(1.085)	0.719
67	5.58	1.90	0.409	(0.486)	0.368	0.041
68	5.67	0.90	0.194	(0.486)	0.174	0.019
69	5.75	0.60	0.129	(0.486)	0.116	0.013
70	5.83	0.50	0.108	(0.486)	0.097	0.011
71	5.92	0.30	0.065	(0.486)	0.058	0.006
72	6.00	0.20	0.043	(0.486)	0.039	0.004
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	4.1

Flood volume = Effective rainfall 0.34(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 1.45(In)
Total soil loss = 2.888(Ac.Ft)
Total rainfall = 1.79(In)
Flood volume = 29748.8 Cubic Feet
Total soil loss = 125788.4 Cubic Feet

Peak flow rate of this hydrograph = 17.329(CFS)

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6 - 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	0.0018	0.26	Q				
0+10	0.0039	0.31	Q				
0+15	0.0061	0.31	Q				
0+20	0.0082	0.31	Q				
0+25	0.0104	0.31	Q				
0+30	0.0129	0.36	Q				
0+35	0.0154	0.36	Q				
0+40	0.0179	0.36	QV				
0+45	0.0204	0.36	QV				
0+50	0.0229	0.36	QV				
0+55	0.0254	0.36	QV				
1+ 0	0.0282	0.41	QV				
1+ 5	0.0311	0.41	QV				
1+10	0.0339	0.41	QV				
1+15	0.0368	0.41	Q V				
1+20	0.0396	0.41	Q V				
1+25	0.0425	0.41	Q V				
1+30	0.0453	0.41	Q V				
1+35	0.0482	0.41	Q V				
1+40	0.0511	0.41	Q V				
1+45	0.0539	0.41	Q V				
1+50	0.0568	0.41	Q V				
1+55	0.0596	0.41	Q V				
2+ 0	0.0628	0.47	Q V				
2+ 5	0.0657	0.41	Q V				
2+10	0.0689	0.47	Q V				
2+15	0.0721	0.47	Q V				
2+20	0.0753	0.47	Q V				
2+25	0.0786	0.47	Q V				
2+30	0.0818	0.47	Q V				
2+35	0.0850	0.47	Q V				
2+40	0.0882	0.47	Q V				
2+45	0.0918	0.52	Q V				
2+50	0.0953	0.52	Q V				
2+55	0.0989	0.52	Q V				
3+ 0	0.1025	0.52	Q V				
3+ 5	0.1060	0.52	Q V				
3+10	0.1100	0.57	Q V				
3+15	0.1139	0.57	Q V				
3+20	0.1178	0.57	Q V				
3+25	0.1221	0.62	Q V				
3+30	0.1268	0.67	Q V				
3+35	0.1318	0.73	Q V				
3+40	0.1368	0.73	Q V				
3+45	0.1421	0.78	Q V				
3+50	0.1475	0.78	Q V				
3+55	0.1532	0.83	Q V				
4+ 0	0.1589	0.83	Q V				
4+ 5	0.1650	0.88	Q V				
4+10	0.1714	0.93	Q V				
4+15	0.1782	0.99	Q V				
4+20	0.1853	1.04	Q V				
4+25	0.1928	1.09	Q V				
4+30	0.2003	1.09	Q V				
4+35	0.2082	1.14	Q V				
4+40	0.2164	1.19	Q V				
4+45	0.2250	1.24	Q V				
4+50	0.2335	1.24	Q V				
4+55	0.2424	1.30	Q V				
5+ 0	0.2547	1.77	Q V				
5+ 5	0.2847	4.37	Q V				
5+10	0.3327	6.96	Q V				
5+15	0.3913	8.51	Q V				
5+20	0.4607	10.07	Q V				
5+25	0.5479	12.66	Q V				
5+30	0.6672	17.33	Q V				
5+35	0.6740	0.99	Q V				
5+40	0.6772	0.47	Q V				
5+45	0.6794	0.31	Q V				
5+50	0.6812	0.26	Q V				
5+55	0.6822	0.16	Q V				
6+ 0	0.6829	0.10	Q V				

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

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Study date 06/20/23 File: 2219E0342410.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - EXISTING CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.00	47.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	5.50	131.40

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 3.440(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.440(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	46.00	0.000
1.480	77.00	0.000
5.160	83.00	0.000

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
46.0	46.0	0.611	0.000	0.611	0.616	0.377
77.0	77.0	0.279	0.000	0.279	0.062	0.017
83.0	83.0	0.210	0.000	0.210	0.216	0.045
					Sum (F) =	0.486

Area averaged mean soil loss (F) (In/Hr) = 0.486
Minimum soil loss rate ((In/Hr)) = 0.243
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.028	(0.861)	0.025	0.003
2	0.17	0.07	0.028	(0.858)	0.025	0.003
3	0.25	0.07	0.028	(0.855)	0.025	0.003
4	0.33	0.10	0.041	(0.851)	0.037	0.004
5	0.42	0.10	0.041	(0.848)	0.037	0.004
6	0.50	0.10	0.041	(0.845)	0.037	0.004
7	0.58	0.10	0.041	(0.841)	0.037	0.004
8	0.67	0.10	0.041	(0.838)	0.037	0.004
9	0.75	0.10	0.041	(0.835)	0.037	0.004
10	0.83	0.13	0.055	(0.832)	0.050	0.006
11	0.92	0.13	0.055	(0.828)	0.050	0.006
12	1.00	0.13	0.055	(0.825)	0.050	0.006
13	1.08	0.10	0.041	(0.822)	0.037	0.004
14	1.17	0.10	0.041	(0.819)	0.037	0.004
15	1.25	0.10	0.041	(0.815)	0.037	0.004
16	1.33	0.10	0.041	(0.812)	0.037	0.004
17	1.42	0.10	0.041	(0.809)	0.037	0.004
18	1.50	0.10	0.041	(0.806)	0.037	0.004
19	1.58	0.10	0.041	(0.802)	0.037	0.004
20	1.67	0.10	0.041	(0.799)	0.037	0.004
21	1.75	0.10	0.041	(0.796)	0.037	0.004
22	1.83	0.13	0.055	(0.793)	0.050	0.006
23	1.92	0.13	0.055	(0.790)	0.050	0.006
24	2.00	0.13	0.055	(0.786)	0.050	0.006
25	2.08	0.13	0.055	(0.783)	0.050	0.006
26	2.17	0.13	0.055	(0.780)	0.050	0.006
27	2.25	0.13	0.055	(0.777)	0.050	0.006
28	2.33	0.13	0.055	(0.774)	0.050	0.006
29	2.42	0.13	0.055	(0.771)	0.050	0.006
30	2.50	0.13	0.055	(0.767)	0.050	0.006
31	2.58	0.17	0.069	(0.764)	0.062	0.007
32	2.67	0.17	0.069	(0.761)	0.062	0.007
33	2.75	0.17	0.069	(0.758)	0.062	0.007
34	2.83	0.17	0.069	(0.755)	0.062	0.007
35	2.92	0.17	0.069	(0.752)	0.062	0.007
36	3.00	0.17	0.069	(0.749)	0.062	0.007
37	3.08	0.17	0.069	(0.746)	0.062	0.007
38	3.17	0.17	0.069	(0.742)	0.062	0.007
39	3.25	0.17	0.069	(0.739)	0.062	0.007
40	3.33	0.17	0.069	(0.736)	0.062	0.007
41	3.42	0.17	0.069	(0.733)	0.062	0.007
42	3.50	0.17	0.069	(0.730)	0.062	0.007
43	3.58	0.17	0.069	(0.727)	0.062	0.007
44	3.67	0.17	0.069	(0.724)	0.062	0.007
45	3.75	0.17	0.069	(0.721)	0.062	0.007
46	3.83	0.20	0.083	(0.718)	0.074	0.008
47	3.92	0.20	0.083	(0.715)	0.074	0.008
48	4.00	0.20	0.083	(0.712)	0.074	0.008
49	4.08	0.20	0.083	(0.709)	0.074	0.008
50	4.17	0.20	0.083	(0.706)	0.074	0.008
51	4.25	0.20	0.083	(0.703)	0.074	0.008
52	4.33	0.23	0.096	(0.700)	0.087	0.010
53	4.42	0.23	0.096	(0.697)	0.087	0.010
54	4.50	0.23	0.096	(0.694)	0.087	0.010
55	4.58	0.23	0.096	(0.691)	0.087	0.010
56	4.67	0.23	0.096	(0.688)	0.087	0.010
57	4.75	0.23	0.096	(0.685)	0.087	0.010
58	4.83	0.27	0.110	(0.682)	0.099	0.011
59	4.92	0.27	0.110	(0.679)	0.099	0.011
60	5.00	0.27	0.110	(0.676)	0.099	0.011
61	5.08	0.20	0.083	(0.673)	0.074	0.008
62	5.17	0.20	0.083	(0.670)	0.074	0.008
63	5.25	0.20	0.083	(0.667)	0.074	0.008
64	5.33	0.23	0.096	(0.664)	0.087	0.010
65	5.42	0.23	0.096	(0.662)	0.087	0.010
66	5.50	0.23	0.096	(0.659)	0.087	0.010
67	5.58	0.27	0.110	(0.656)	0.099	0.011
68	5.67	0.27	0.110	(0.653)	0.099	0.011
69	5.75	0.27	0.110	(0.650)	0.099	0.011
70	5.83	0.27	0.110	(0.647)	0.099	0.011
71	5.92	0.27	0.110	(0.644)	0.099	0.011
72	6.00	0.27	0.110	(0.641)	0.099	0.011
73	6.08	0.30	0.124	(0.639)	0.111	0.012
74	6.17	0.30	0.124	(0.636)	0.111	0.012
75	6.25	0.30	0.124	(0.633)	0.111	0.012
76	6.33	0.30	0.124	(0.630)	0.111	0.012
77	6.42	0.30	0.124	(0.627)	0.111	0.012
78	6.50	0.30	0.124	(0.624)	0.111	0.012
79	6.58	0.33	0.138	(0.622)	0.124	0.014
80	6.67	0.33	0.138	(0.619)	0.124	0.014
81	6.75	0.33	0.138	(0.616)	0.124	0.014
82	6.83	0.33	0.138	(0.613)	0.124	0.014
83	6.92	0.33	0.138	(0.610)	0.124	0.014
84	7.00	0.33	0.138	(0.608)	0.124	0.014
85	7.08	0.33	0.138	(0.605)	0.124	0.014
86	7.17	0.33	0.138	(0.602)	0.124	0.014
87	7.25	0.33	0.138	(0.599)	0.124	0.014
88	7.33	0.37	0.151	(0.597)	0.136	0.015
89	7.42	0.37	0.151	(0.594)	0.136	0.015

90	7.50	0.37	0.151	(	0.591)	0.136			0.015		
91	7.58	0.40	0.165	(	0.589)	0.149			0.017		
92	7.67	0.40	0.165	(	0.586)	0.149			0.017		
93	7.75	0.40	0.165	(	0.583)	0.149			0.017		
94	7.83	0.43	0.179	(	0.580)	0.161			0.018		
95	7.92	0.43	0.179	(	0.578)	0.161			0.018		
96	8.00	0.43	0.179	(	0.575)	0.161			0.018		
97	8.08	0.50	0.206	(	0.572)	0.186			0.021		
98	8.17	0.50	0.206	(	0.570)	0.186			0.021		
99	8.25	0.50	0.206	(	0.567)	0.186			0.021		
100	8.33	0.50	0.206	(	0.564)	0.186			0.021		
101	8.42	0.50	0.206	(	0.562)	0.186			0.021		
102	8.50	0.50	0.206	(	0.559)	0.186			0.021		
103	8.58	0.53	0.220	(	0.557)	0.198			0.022		
104	8.67	0.53	0.220	(	0.554)	0.198			0.022		
105	8.75	0.53	0.220	(	0.551)	0.198			0.022		
106	8.83	0.57	0.234	(	0.549)	0.211			0.023		
107	8.92	0.57	0.234	(	0.546)	0.211			0.023		
108	9.00	0.57	0.234	(	0.544)	0.211			0.023		
109	9.08	0.63	0.261	(	0.541)	0.235			0.026		
110	9.17	0.63	0.261	(	0.538)	0.235			0.026		
111	9.25	0.63	0.261	(	0.536)	0.235			0.026		
112	9.33	0.67	0.275	(	0.533)	0.248			0.028		
113	9.42	0.67	0.275	(	0.531)	0.248			0.028		
114	9.50	0.67	0.275	(	0.528)	0.248			0.028		
115	9.58	0.70	0.289	(	0.526)	0.260			0.029		
116	9.67	0.70	0.289	(	0.523)	0.260			0.029		
117	9.75	0.70	0.289	(	0.521)	0.260			0.029		
118	9.83	0.73	0.303	(	0.518)	0.272			0.030		
119	9.92	0.73	0.303	(	0.516)	0.272			0.030		
120	10.00	0.73	0.303	(	0.513)	0.272			0.030		
121	10.08	0.50	0.206	(	0.511)	0.186			0.021		
122	10.17	0.50	0.206	(	0.508)	0.186			0.021		
123	10.25	0.50	0.206	(	0.506)	0.186			0.021		
124	10.33	0.50	0.206	(	0.503)	0.186			0.021		
125	10.42	0.50	0.206	(	0.501)	0.186			0.021		
126	10.50	0.50	0.206	(	0.498)	0.186			0.021		
127	10.58	0.67	0.275	(	0.496)	0.248			0.028		
128	10.67	0.67	0.275	(	0.493)	0.248			0.028		
129	10.75	0.67	0.275	(	0.491)	0.248			0.028		
130	10.83	0.67	0.275	(	0.489)	0.248			0.028		
131	10.92	0.67	0.275	(	0.486)	0.248			0.028		
132	11.00	0.67	0.275	(	0.484)	0.248			0.028		
133	11.08	0.63	0.261	(	0.481)	0.235			0.026		
134	11.17	0.63	0.261	(	0.479)	0.235			0.026		
135	11.25	0.63	0.261	(	0.477)	0.235			0.026		
136	11.33	0.63	0.261	(	0.474)	0.235			0.026		
137	11.42	0.63	0.261	(	0.472)	0.235			0.026		
138	11.50	0.63	0.261	(	0.470)	0.235			0.026		
139	11.58	0.57	0.234	(	0.467)	0.211			0.023		
140	11.67	0.57	0.234	(	0.465)	0.211			0.023		
141	11.75	0.57	0.234	(	0.463)	0.211			0.023		
142	11.83	0.60	0.248	(	0.460)	0.223			0.025		
143	11.92	0.60	0.248	(	0.458)	0.223			0.025		
144	12.00	0.60	0.248	(	0.456)	0.223			0.025		
145	12.08	0.83	0.344	(	0.454)	0.310			0.034		
146	12.17	0.83	0.344	(	0.451)	0.310			0.034		
147	12.25	0.83	0.344	(	0.449)	0.310			0.034		
148	12.33	0.87	0.358	(	0.447)	0.322			0.036		
149	12.42	0.87	0.358	(	0.445)	0.322			0.036		
150	12.50	0.87	0.358	(	0.442)	0.322			0.036		
151	12.58	0.93	0.385	(	0.440)	0.347			0.039		
152	12.67	0.93	0.385	(	0.438)	0.347			0.039		
153	12.75	0.93	0.385	(	0.436)	0.347			0.039		
154	12.83	0.97	0.399	(	0.433)	0.359			0.040		
155	12.92	0.97	0.399	(	0.431)	0.359			0.040		
156	13.00	0.97	0.399	(	0.429)	0.359			0.040		
157	13.08	1.13	0.468	(	0.427)	0.421			0.047		
158	13.17	1.13	0.468	(	0.425)	0.421			0.047		
159	13.25	1.13	0.468	(	0.423)	0.421			0.047		
160	13.33	1.13	0.468		0.420	(	0.421)		0.047		
161	13.42	1.13	0.468		0.418	(	0.421)		0.049		
162	13.50	1.13	0.468		0.416	(	0.421)		0.052		
163	13.58	0.77	0.316	(	0.414)	0.285			0.032		
164	13.67	0.77	0.316	(	0.412)	0.285			0.032		
165	13.75	0.77	0.316	(	0.410)	0.285			0.032		
166	13.83	0.77	0.316	(	0.408)	0.285			0.032		
167	13.92	0.77	0.316	(	0.406)	0.285			0.032		
168	14.00	0.77	0.316	(	0.404)	0.285			0.032		
169	14.08	0.90	0.371	(	0.402)	0.334			0.037		
170	14.17	0.90	0.371	(	0.400)	0.334			0.037		
171	14.25	0.90	0.371	(	0.397)	0.334			0.037		
172	14.33	0.87	0.358	(	0.395)	0.322			0.036		
173	14.42	0.87	0.358	(	0.393)	0.322			0.036		
174	14.50	0.87	0.358	(	0.391)	0.322			0.036		
175	14.58	0.87	0.358	(	0.389)	0.322			0.036		
176	14.67	0.87	0.358	(	0.387)	0.322			0.036		
177	14.75	0.87	0.358	(	0.385)	0.322			0.036		
178	14.83	0.83	0.344	(	0.383)	0.310			0.034		
179	14.92	0.83	0.344	(	0.381)	0.310			0.034		
180	15.00	0.83	0.344	(	0.380)	0.310			0.034		
181	15.08	0.80	0.330	(	0.378)	0.297			0.033		
182	15.17	0.80	0.330	(	0.376)	0.297			0.033		
183	15.25	0.80	0.330	(	0.374)	0.297			0.033		
184	15.33	0.77	0.316	(	0.372)	0.285			0.032		
185	15.42	0.77	0.316	(	0.370)	0.285			0.032		
186	15.50	0.77	0.316	(	0.368)	0.285			0.032		

187	15.58	0.63	0.261	(0.366)	0.235	0.026
188	15.67	0.63	0.261	(0.364)	0.235	0.026
189	15.75	0.63	0.261	(0.362)	0.235	0.026
190	15.83	0.63	0.261	(0.361)	0.235	0.026
191	15.92	0.63	0.261	(0.359)	0.235	0.026
192	16.00	0.63	0.261	(0.357)	0.235	0.026
193	16.08	0.13	0.055	(0.355)	0.050	0.006
194	16.17	0.13	0.055	(0.353)	0.050	0.006
195	16.25	0.13	0.055	(0.351)	0.050	0.006
196	16.33	0.13	0.055	(0.350)	0.050	0.006
197	16.42	0.13	0.055	(0.348)	0.050	0.006
198	16.50	0.13	0.055	(0.346)	0.050	0.006
199	16.58	0.10	0.041	(0.344)	0.037	0.004
200	16.67	0.10	0.041	(0.343)	0.037	0.004
201	16.75	0.10	0.041	(0.341)	0.037	0.004
202	16.83	0.10	0.041	(0.339)	0.037	0.004
203	16.92	0.10	0.041	(0.337)	0.037	0.004
204	17.00	0.10	0.041	(0.336)	0.037	0.004
205	17.08	0.17	0.069	(0.334)	0.062	0.007
206	17.17	0.17	0.069	(0.332)	0.062	0.007
207	17.25	0.17	0.069	(0.331)	0.062	0.007
208	17.33	0.17	0.069	(0.329)	0.062	0.007
209	17.42	0.17	0.069	(0.327)	0.062	0.007
210	17.50	0.17	0.069	(0.326)	0.062	0.007
211	17.58	0.17	0.069	(0.324)	0.062	0.007
212	17.67	0.17	0.069	(0.322)	0.062	0.007
213	17.75	0.17	0.069	(0.321)	0.062	0.007
214	17.83	0.13	0.055	(0.319)	0.050	0.006
215	17.92	0.13	0.055	(0.318)	0.050	0.006
216	18.00	0.13	0.055	(0.316)	0.050	0.006
217	18.08	0.13	0.055	(0.314)	0.050	0.006
218	18.17	0.13	0.055	(0.313)	0.050	0.006
219	18.25	0.13	0.055	(0.311)	0.050	0.006
220	18.33	0.13	0.055	(0.310)	0.050	0.006
221	18.42	0.13	0.055	(0.308)	0.050	0.006
222	18.50	0.13	0.055	(0.307)	0.050	0.006
223	18.58	0.10	0.041	(0.305)	0.037	0.004
224	18.67	0.10	0.041	(0.304)	0.037	0.004
225	18.75	0.10	0.041	(0.302)	0.037	0.004
226	18.83	0.07	0.028	(0.301)	0.025	0.003
227	18.92	0.07	0.028	(0.300)	0.025	0.003
228	19.00	0.07	0.028	(0.298)	0.025	0.003
229	19.08	0.10	0.041	(0.297)	0.037	0.004
230	19.17	0.10	0.041	(0.295)	0.037	0.004
231	19.25	0.10	0.041	(0.294)	0.037	0.004
232	19.33	0.13	0.055	(0.293)	0.050	0.006
233	19.42	0.13	0.055	(0.291)	0.050	0.006
234	19.50	0.13	0.055	(0.290)	0.050	0.006
235	19.58	0.10	0.041	(0.289)	0.037	0.004
236	19.67	0.10	0.041	(0.287)	0.037	0.004
237	19.75	0.10	0.041	(0.286)	0.037	0.004
238	19.83	0.07	0.028	(0.285)	0.025	0.003
239	19.92	0.07	0.028	(0.283)	0.025	0.003
240	20.00	0.07	0.028	(0.282)	0.025	0.003
241	20.08	0.10	0.041	(0.281)	0.037	0.004
242	20.17	0.10	0.041	(0.280)	0.037	0.004
243	20.25	0.10	0.041	(0.278)	0.037	0.004
244	20.33	0.10	0.041	(0.277)	0.037	0.004
245	20.42	0.10	0.041	(0.276)	0.037	0.004
246	20.50	0.10	0.041	(0.275)	0.037	0.004
247	20.58	0.10	0.041	(0.274)	0.037	0.004
248	20.67	0.10	0.041	(0.273)	0.037	0.004
249	20.75	0.10	0.041	(0.271)	0.037	0.004
250	20.83	0.07	0.028	(0.270)	0.025	0.003
251	20.92	0.07	0.028	(0.269)	0.025	0.003
252	21.00	0.07	0.028	(0.268)	0.025	0.003
253	21.08	0.10	0.041	(0.267)	0.037	0.004
254	21.17	0.10	0.041	(0.266)	0.037	0.004
255	21.25	0.10	0.041	(0.265)	0.037	0.004
256	21.33	0.07	0.028	(0.264)	0.025	0.003
257	21.42	0.07	0.028	(0.263)	0.025	0.003
258	21.50	0.07	0.028	(0.262)	0.025	0.003
259	21.58	0.10	0.041	(0.261)	0.037	0.004
260	21.67	0.10	0.041	(0.260)	0.037	0.004
261	21.75	0.10	0.041	(0.259)	0.037	0.004
262	21.83	0.07	0.028	(0.258)	0.025	0.003
263	21.92	0.07	0.028	(0.257)	0.025	0.003
264	22.00	0.07	0.028	(0.257)	0.025	0.003
265	22.08	0.10	0.041	(0.256)	0.037	0.004
266	22.17	0.10	0.041	(0.255)	0.037	0.004
267	22.25	0.10	0.041	(0.254)	0.037	0.004
268	22.33	0.07	0.028	(0.253)	0.025	0.003
269	22.42	0.07	0.028	(0.252)	0.025	0.003
270	22.50	0.07	0.028	(0.252)	0.025	0.003
271	22.58	0.07	0.028	(0.251)	0.025	0.003
272	22.67	0.07	0.028	(0.250)	0.025	0.003
273	22.75	0.07	0.028	(0.250)	0.025	0.003
274	22.83	0.07	0.028	(0.249)	0.025	0.003
275	22.92	0.07	0.028	(0.248)	0.025	0.003
276	23.00	0.07	0.028	(0.248)	0.025	0.003
277	23.08	0.07	0.028	(0.247)	0.025	0.003
278	23.17	0.07	0.028	(0.247)	0.025	0.003
279	23.25	0.07	0.028	(0.246)	0.025	0.003
280	23.33	0.07	0.028	(0.246)	0.025	0.003
281	23.42	0.07	0.028	(0.245)	0.025	0.003
282	23.50	0.07	0.028	(0.245)	0.025	0.003
283	23.58	0.07	0.028	(0.244)	0.025	0.003

284	23.67	0.07	0.028	(0.244)	0.025	0.003	
285	23.75	0.07	0.028	(0.244)	0.025	0.003	
286	23.83	0.07	0.028	(0.243)	0.025	0.003	
287	23.92	0.07	0.028	(0.243)	0.025	0.003	
288	24.00	0.07	0.028	(0.243)	0.025	0.003	

(Loss Rate Not Used)

Sum = 100.0 Sum = 4.1

Flood volume = Effective rainfall 0.34(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 0.7(Ac.Ft)
Total soil loss = 3.10(In)
Total soil loss = 6.162(Ac.Ft)
Total rainfall = 3.44(In)
Flood volume = 29888.7 Cubic Feet
Total soil loss = 268410.4 Cubic Feet

Peak flow rate of this hydrograph = 1.244(CFS)

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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	2.5	5.0	7.5	10.0
0+ 5	0.0005	0.07	Q				
0+10	0.0009	0.07	Q				
0+15	0.0014	0.07	Q				
0+20	0.0021	0.10	Q				
0+25	0.0027	0.10	Q				
0+30	0.0034	0.10	Q				
0+35	0.0041	0.10	Q				
0+40	0.0048	0.10	Q				
0+45	0.0055	0.10	Q				
0+50	0.0064	0.13	Q				
0+55	0.0073	0.13	Q				
1+ 0	0.0082	0.13	Q				
1+ 5	0.0089	0.10	Q				
1+10	0.0096	0.10	Q				
1+15	0.0103	0.10	Q				
1+20	0.0110	0.10	Q				
1+25	0.0116	0.10	Q				
1+30	0.0123	0.10	Q				
1+35	0.0130	0.10	Q				
1+40	0.0137	0.10	Q				
1+45	0.0144	0.10	Q				
1+50	0.0153	0.13	Q				
1+55	0.0162	0.13	Q				
2+ 0	0.0171	0.13	Q				
2+ 5	0.0180	0.13	QV				
2+10	0.0189	0.13	QV				
2+15	0.0199	0.13	QV				
2+20	0.0208	0.13	QV				
2+25	0.0217	0.13	QV				
2+30	0.0226	0.13	QV				
2+35	0.0237	0.17	QV				
2+40	0.0249	0.17	QV				
2+45	0.0260	0.17	QV				
2+50	0.0272	0.17	QV				
2+55	0.0283	0.17	QV				
3+ 0	0.0294	0.17	QV				
3+ 5	0.0306	0.17	QV				
3+10	0.0317	0.17	QV				
3+15	0.0329	0.17	QV				
3+20	0.0340	0.17	QV				
3+25	0.0352	0.17	Q V				
3+30	0.0363	0.17	Q V				
3+35	0.0374	0.17	Q V				
3+40	0.0386	0.17	Q V				
3+45	0.0397	0.17	Q V				
3+50	0.0411	0.20	Q V				
3+55	0.0425	0.20	Q V				
4+ 0	0.0438	0.20	Q V				
4+ 5	0.0452	0.20	Q V				
4+10	0.0466	0.20	Q V				
4+15	0.0479	0.20	Q V				
4+20	0.0495	0.23	Q V				
4+25	0.0511	0.23	Q V				
4+30	0.0527	0.23	Q V				
4+35	0.0543	0.23	Q V				
4+40	0.0559	0.23	Q V				
4+45	0.0575	0.23	Q V				
4+50	0.0593	0.27	Q V				
4+55	0.0612	0.27	Q V				
5+ 0	0.0630	0.27	Q V				
5+ 5	0.0644	0.20	Q V				
5+10	0.0657	0.20	Q V				
5+15	0.0671	0.20	Q V				
5+20	0.0687	0.23	Q V				
5+25	0.0703	0.23	Q V				
5+30	0.0719	0.23	Q V				
5+35	0.0737	0.27	Q V				
5+40	0.0756	0.27	Q V				
5+45	0.0774	0.27	Q V				
5+50	0.0792	0.27	Q V				
5+55	0.0810	0.27	Q V				

6+ 0	0.0829	0.27	Q V
6+ 5	0.0849	0.30	Q V
6+10	0.0870	0.30	Q V
6+15	0.0890	0.30	Q V
6+20	0.0911	0.30	Q V
6+25	0.0931	0.30	Q V
6+30	0.0952	0.30	Q V
6+35	0.0975	0.33	Q V
6+40	0.0998	0.33	Q V
6+45	0.1020	0.33	Q V
6+50	0.1043	0.33	Q V
6+55	0.1066	0.33	Q V
7+ 0	0.1089	0.33	Q V
7+ 5	0.1112	0.33	Q V
7+10	0.1134	0.33	Q V
7+15	0.1157	0.33	Q V
7+20	0.1182	0.36	Q V
7+25	0.1208	0.36	Q V
7+30	0.1233	0.36	Q V
7+35	0.1260	0.40	Q V
7+40	0.1287	0.40	Q V
7+45	0.1315	0.40	Q V
7+50	0.1344	0.43	Q V
7+55	0.1374	0.43	Q V
8+ 0	0.1404	0.43	Q V
8+ 5	0.1438	0.50	Q V
8+10	0.1472	0.50	Q V
8+15	0.1507	0.50	Q V
8+20	0.1541	0.50	Q V
8+25	0.1575	0.50	Q V
8+30	0.1609	0.50	Q V
8+35	0.1646	0.53	Q V
8+40	0.1682	0.53	Q V
8+45	0.1719	0.53	Q V
8+50	0.1758	0.56	Q V
8+55	0.1796	0.56	Q V
9+ 0	0.1835	0.56	Q V
9+ 5	0.1879	0.63	Q V
9+10	0.1922	0.63	Q V
9+15	0.1965	0.63	Q V
9+20	0.2011	0.66	Q V
9+25	0.2057	0.66	Q V
9+30	0.2102	0.66	Q V
9+35	0.2150	0.70	Q V
9+40	0.2198	0.70	Q V
9+45	0.2246	0.70	Q V
9+50	0.2296	0.73	Q V
9+55	0.2347	0.73	Q V
10+ 0	0.2397	0.73	Q V
10+ 5	0.2431	0.50	Q V
10+10	0.2465	0.50	Q V
10+15	0.2500	0.50	Q V
10+20	0.2534	0.50	Q V
10+25	0.2568	0.50	Q V
10+30	0.2602	0.50	Q V
10+35	0.2648	0.66	Q V
10+40	0.2694	0.66	Q V
10+45	0.2739	0.66	Q V
10+50	0.2785	0.66	Q V
10+55	0.2831	0.66	Q V
11+ 0	0.2876	0.66	Q V
11+ 5	0.2920	0.63	Q V
11+10	0.2963	0.63	Q V
11+15	0.3006	0.63	Q V
11+20	0.3050	0.63	Q V
11+25	0.3093	0.63	Q V
11+30	0.3136	0.63	Q V
11+35	0.3175	0.56	Q V
11+40	0.3214	0.56	Q V
11+45	0.3253	0.56	Q V
11+50	0.3294	0.60	Q V
11+55	0.3335	0.60	Q V
12+ 0	0.3376	0.60	Q V
12+ 5	0.3433	0.83	Q V
12+10	0.3490	0.83	Q V
12+15	0.3547	0.83	Q V
12+20	0.3607	0.86	Q V
12+25	0.3666	0.86	Q V
12+30	0.3725	0.86	Q V
12+35	0.3789	0.93	Q V
12+40	0.3853	0.93	Q V
12+45	0.3917	0.93	Q V
12+50	0.3983	0.96	Q V
12+55	0.4049	0.96	Q V
13+ 0	0.4116	0.96	Q V
13+ 5	0.4193	1.13	Q V
13+10	0.4271	1.13	Q V
13+15	0.4348	1.13	Q V
13+20	0.4427	1.14	Q V
13+25	0.4509	1.19	Q V
13+30	0.4595	1.24	Q V
13+35	0.4647	0.76	Q V
13+40	0.4700	0.76	Q V
13+45	0.4752	0.76	Q V
13+50	0.4805	0.76	Q V
13+55	0.4857	0.76	Q V
14+ 0	0.4910	0.76	Q V

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22+10	0.6759	0.10	Q				V
22+15	0.6766	0.10	Q				V
22+20	0.6770	0.07	Q				V
22+25	0.6775	0.07	Q				V
22+30	0.6779	0.07	Q				V
22+35	0.6784	0.07	Q				V
22+40	0.6788	0.07	Q				V
22+45	0.6793	0.07	Q				V
22+50	0.6798	0.07	Q				V
22+55	0.6802	0.07	Q				V
23+ 0	0.6807	0.07	Q				V
23+ 5	0.6811	0.07	Q				V
23+10	0.6816	0.07	Q				V
23+15	0.6820	0.07	Q				V
23+20	0.6825	0.07	Q				V
23+25	0.6830	0.07	Q				V
23+30	0.6834	0.07	Q				V
23+35	0.6839	0.07	Q				V
23+40	0.6843	0.07	Q				V
23+45	0.6848	0.07	Q				V
23+50	0.6852	0.07	Q				V
23+55	0.6857	0.07	Q				V
24+ 0	0.6862	0.07	Q				V

PROPOSED CONDITION HYDROGRAPHS

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

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Study date 06/20/23 File: 2219P012110.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.52	20.49

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.15	45.31

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 0.779(In)
Areal adjustment factor = 99.96 %
Adjusted average point rain = 0.779(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
32.0	32.0	0.742	0.900	0.141	0.552	0.078
69.0	69.0	0.373	0.900	0.071	0.379	0.027
75.0	75.0	0.303	0.900	0.058	0.003	0.000
					Sum (F) =	0.123

Area averaged mean soil loss (F) (In/Hr) = 0.123
Minimum soil loss rate ((In/Hr)) = 0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1 0.083	1.#IO	100.000	39.708
	Sum = 100.000	Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	4.10	0.383	(0.123)	0.088	0.295
2	0.17	4.60	0.430	(0.123)	0.099	0.331
3	0.25	4.50	0.421	(0.123)	0.097	0.324
4	0.33	4.90	0.458	(0.123)	0.105	0.353
5	0.42	5.50	0.514	(0.123)	0.118	0.396
6	0.50	6.40	0.598	0.123	(0.138)	0.475
7	0.58	7.10	0.664	0.123	(0.153)	0.540
8	0.67	9.00	0.841	0.123	(0.193)	0.718
9	0.75	12.90	1.206	0.123	(0.277)	1.082
10	0.83	29.50	2.757	0.123	(0.634)	2.634
11	0.92	7.00	0.654	0.123	(0.150)	0.531
12	1.00	4.50	0.421	(0.123)	0.097	0.324

(Loss Rate Not Used)

Sum = 100.0 Sum = 8.0

Flood volume = Effective rainfall 0.67(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 2.2(Ac.Ft)
Total soil loss = 0.11(In)
Total soil loss = 0.368(Ac.Ft)
Total rainfall = 0.78(In)
Flood volume = 95371.1 Cubic Feet
Total soil loss = 16030.0 Cubic Feet

Peak flow rate of this hydrograph = 104.639(CFS)

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1 - 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	50.0	100.0	150.0	200.0
0+ 5	0.0807	11.72	VQ				
0+10	0.1713	13.15	QV				
0+15	0.2599	12.87	Q V				
0+20	0.3564	14.01	Q V				
0+25	0.4647	15.73	Q V				
0+30	0.5946	18.86	Q V				
0+35	0.7424	21.46	Q V				
0+40	0.9388	28.51	Q V				
0+45	1.2349	43.00	Q V				
0+50	1.9556	104.64	Q		V		
0+55	2.1008	21.09	Q			V	
1+ 0	2.1894	12.87	Q				V

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

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Study date 06/20/23 File: 2219P012310.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.95	37.43

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.90	74.86

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.341(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 1.341(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
32.0	32.0	0.742	0.900	0.141	0.552	0.078
69.0	69.0	0.373	0.900	0.071	0.379	0.027
75.0	75.0	0.303	0.900	0.058	0.003	0.000
					Sum (F) =	0.123

Area averaged mean soil loss (F) (In/Hr) = 0.123
Minimum soil loss rate ((In/Hr)) = 0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.209	(0.123)	0.048	0.161
2	0.17	1.30	0.209	(0.123)	0.048	0.161
3	0.25	1.10	0.177	(0.123)	0.041	0.136
4	0.33	1.50	0.241	(0.123)	0.056	0.186
5	0.42	1.50	0.241	(0.123)	0.056	0.186
6	0.50	1.80	0.290	(0.123)	0.067	0.223
7	0.58	1.50	0.241	(0.123)	0.056	0.186
8	0.67	1.80	0.290	(0.123)	0.067	0.223
9	0.75	1.80	0.290	(0.123)	0.067	0.223
10	0.83	1.50	0.241	(0.123)	0.056	0.186
11	0.92	1.60	0.257	(0.123)	0.059	0.198
12	1.00	1.80	0.290	(0.123)	0.067	0.223
13	1.08	2.20	0.354	(0.123)	0.081	0.273
14	1.17	2.20	0.354	(0.123)	0.081	0.273
15	1.25	2.20	0.354	(0.123)	0.081	0.273
16	1.33	2.00	0.322	(0.123)	0.074	0.248
17	1.42	2.60	0.418	(0.123)	0.096	0.322
18	1.50	2.70	0.434	(0.123)	0.100	0.334
19	1.58	2.40	0.386	(0.123)	0.089	0.297
20	1.67	2.70	0.434	(0.123)	0.100	0.334
21	1.75	3.30	0.531	(0.123)	0.122	0.409
22	1.83	3.10	0.499	(0.123)	0.115	0.384
23	1.92	2.90	0.467	(0.123)	0.107	0.359
24	2.00	3.00	0.483	(0.123)	0.111	0.372
25	2.08	3.10	0.499	(0.123)	0.115	0.384
26	2.17	4.20	0.676	0.123	(0.155)	0.552
27	2.25	5.00	0.804	0.123	(0.185)	0.681
28	2.33	3.50	0.563	0.123	(0.130)	0.440
29	2.42	6.80	1.094	0.123	(0.252)	0.970
30	2.50	7.30	1.174	0.123	(0.270)	1.051
31	2.58	8.20	1.319	0.123	(0.303)	1.196
32	2.67	5.90	0.949	0.123	(0.218)	0.826
33	2.75	2.00	0.322	(0.123)	0.074	0.248
34	2.83	1.80	0.290	(0.123)	0.067	0.223
35	2.92	1.80	0.290	(0.123)	0.067	0.223
36	3.00	0.60	0.097	(0.123)	0.022	0.074

(Loss Rate Not Used)

Sum = 100.0 Sum = 13.0

Flood volume = Effective rainfall 1.09(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 3.6(Ac.Ft)
Total soil loss = 0.25(In)
Total soil loss = 0.835(Ac.Ft)
Total rainfall = 1.34(In)
Flood volume = 155371.7 Cubic Feet
Total soil loss = 36364.5 Cubic Feet

Peak flow rate of this hydrograph = 47.502(CFS)

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3 - 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	12.5	25.0	37.5	50.0
0+ 5	0.0441	6.40	V Q				
0+10	0.0881	6.40	V Q				
0+15	0.1254	5.41	V Q				
0+20	0.1762	7.38	V Q				
0+25	0.2271	7.38	V Q				
0+30	0.2881	8.86	V Q				
0+35	0.3389	7.38	V Q				
0+40	0.3999	8.86	V Q				
0+45	0.4609	8.86	V Q				
0+50	0.5118	7.38	Q				
0+55	0.5660	7.87	Q				
1+ 0	0.6270	8.86	Q				
1+ 5	0.7016	10.83	VQ				
1+10	0.7761	10.83	Q				
1+15	0.8507	10.83	QV				
1+20	0.9185	9.84	Q V				
1+25	1.0066	12.80	QV				
1+30	1.0981	13.29	Q V				
1+35	1.1795	11.81	Q V				
1+40	1.2710	13.29	Q V				
1+45	1.3828	16.24	Q V				
1+50	1.4879	15.26	Q V				
1+55	1.5862	14.27	Q V				
2+ 0	1.6879	14.76	Q V				
2+ 5	1.7929	15.26	Q V				
2+10	1.9440	21.94	Q V				
2+15	2.1303	27.05	Q V				
2+20	2.2506	17.46	Q V				
2+25	2.5161	38.55	V Q				
2+30	2.8036	41.75	V Q				
2+35	3.1308	47.50	V Q				
2+40	3.3567	32.80	Q V				
2+45	3.4245	9.84	Q V				
2+50	3.4855	8.86	Q V				
2+55	3.5465	8.86	Q V				
3+ 0	3.5668	2.95	Q V				

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

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Study date 06/20/23 File: 2219P012610.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.30	51.22

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.50	98.50

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.794(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.793(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
32.0	32.0	0.742	0.900	0.141	0.552	0.078
69.0	69.0	0.373	0.900	0.071	0.379	0.027
75.0	75.0	0.303	0.900	0.058	0.003	0.000
					Sum (F) =	0.123

Area averaged mean soil loss (F) (In/Hr) = 0.123
Minimum soil loss rate ((In/Hr)) = 0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.108	(0.123)	0.025	0.083
2	0.17	0.60	0.129	(0.123)	0.030	0.099
3	0.25	0.60	0.129	(0.123)	0.030	0.099
4	0.33	0.60	0.129	(0.123)	0.030	0.099
5	0.42	0.60	0.129	(0.123)	0.030	0.099
6	0.50	0.70	0.151	(0.123)	0.035	0.116
7	0.58	0.70	0.151	(0.123)	0.035	0.116
8	0.67	0.70	0.151	(0.123)	0.035	0.116
9	0.75	0.70	0.151	(0.123)	0.035	0.116
10	0.83	0.70	0.151	(0.123)	0.035	0.116
11	0.92	0.70	0.151	(0.123)	0.035	0.116
12	1.00	0.80	0.172	(0.123)	0.040	0.133
13	1.08	0.80	0.172	(0.123)	0.040	0.133
14	1.17	0.80	0.172	(0.123)	0.040	0.133
15	1.25	0.80	0.172	(0.123)	0.040	0.133
16	1.33	0.80	0.172	(0.123)	0.040	0.133
17	1.42	0.80	0.172	(0.123)	0.040	0.133
18	1.50	0.80	0.172	(0.123)	0.040	0.133
19	1.58	0.80	0.172	(0.123)	0.040	0.133
20	1.67	0.80	0.172	(0.123)	0.040	0.133
21	1.75	0.80	0.172	(0.123)	0.040	0.133
22	1.83	0.80	0.172	(0.123)	0.040	0.133
23	1.92	0.80	0.172	(0.123)	0.040	0.133
24	2.00	0.90	0.194	(0.123)	0.045	0.149
25	2.08	0.80	0.172	(0.123)	0.040	0.133
26	2.17	0.90	0.194	(0.123)	0.045	0.149
27	2.25	0.90	0.194	(0.123)	0.045	0.149
28	2.33	0.90	0.194	(0.123)	0.045	0.149
29	2.42	0.90	0.194	(0.123)	0.045	0.149
30	2.50	0.90	0.194	(0.123)	0.045	0.149
31	2.58	0.90	0.194	(0.123)	0.045	0.149
32	2.67	0.90	0.194	(0.123)	0.045	0.149
33	2.75	1.00	0.215	(0.123)	0.049	0.166
34	2.83	1.00	0.215	(0.123)	0.049	0.166
35	2.92	1.00	0.215	(0.123)	0.049	0.166
36	3.00	1.00	0.215	(0.123)	0.049	0.166
37	3.08	1.00	0.215	(0.123)	0.049	0.166
38	3.17	1.10	0.237	(0.123)	0.054	0.182
39	3.25	1.10	0.237	(0.123)	0.054	0.182
40	3.33	1.10	0.237	(0.123)	0.054	0.182
41	3.42	1.20	0.258	(0.123)	0.059	0.199
42	3.50	1.30	0.280	(0.123)	0.064	0.215
43	3.58	1.40	0.301	(0.123)	0.069	0.232
44	3.67	1.40	0.301	(0.123)	0.069	0.232
45	3.75	1.50	0.323	(0.123)	0.074	0.249
46	3.83	1.50	0.323	(0.123)	0.074	0.249
47	3.92	1.60	0.344	(0.123)	0.079	0.265
48	4.00	1.60	0.344	(0.123)	0.079	0.265
49	4.08	1.70	0.366	(0.123)	0.084	0.282
50	4.17	1.80	0.387	(0.123)	0.089	0.298
51	4.25	1.90	0.409	(0.123)	0.094	0.315
52	4.33	2.00	0.430	(0.123)	0.099	0.331
53	4.42	2.10	0.452	(0.123)	0.104	0.348
54	4.50	2.10	0.452	(0.123)	0.104	0.348
55	4.58	2.20	0.473	(0.123)	0.109	0.365
56	4.67	2.30	0.495	(0.123)	0.114	0.381
57	4.75	2.40	0.517	(0.123)	0.119	0.398
58	4.83	2.40	0.517	(0.123)	0.119	0.398
59	4.92	2.50	0.538	0.123	(0.124)	0.415
60	5.00	2.60	0.560	0.123	(0.129)	0.436
61	5.08	3.10	0.667	0.123	(0.153)	0.544
62	5.17	3.60	0.775	0.123	(0.178)	0.651
63	5.25	3.90	0.839	0.123	(0.193)	0.716
64	5.33	4.20	0.904	0.123	(0.208)	0.780
65	5.42	4.70	1.012	0.123	(0.233)	0.888
66	5.50	5.60	1.205	0.123	(0.277)	1.082
67	5.58	1.90	0.409	(0.123)	0.094	0.315
68	5.67	0.90	0.194	(0.123)	0.045	0.149
69	5.75	0.60	0.129	(0.123)	0.030	0.099
70	5.83	0.50	0.108	(0.123)	0.025	0.083
71	5.92	0.30	0.065	(0.123)	0.015	0.050
72	6.00	0.20	0.043	(0.123)	0.010	0.033

(Loss Rate Not Used)

Sum = 100.0 Sum = 17.1

Flood volume = Effective rainfall 1.42(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 4.7(Ac.Ft)
Total soil loss = 0.37(In)
Total soil loss = 1.216(Ac.Ft)
Total rainfall = 1.79(In)
Flood volume = 203549.9 Cubic Feet
Total soil loss = 52952.4 Cubic Feet

Peak flow rate of this hydrograph = 42.975(CFS)

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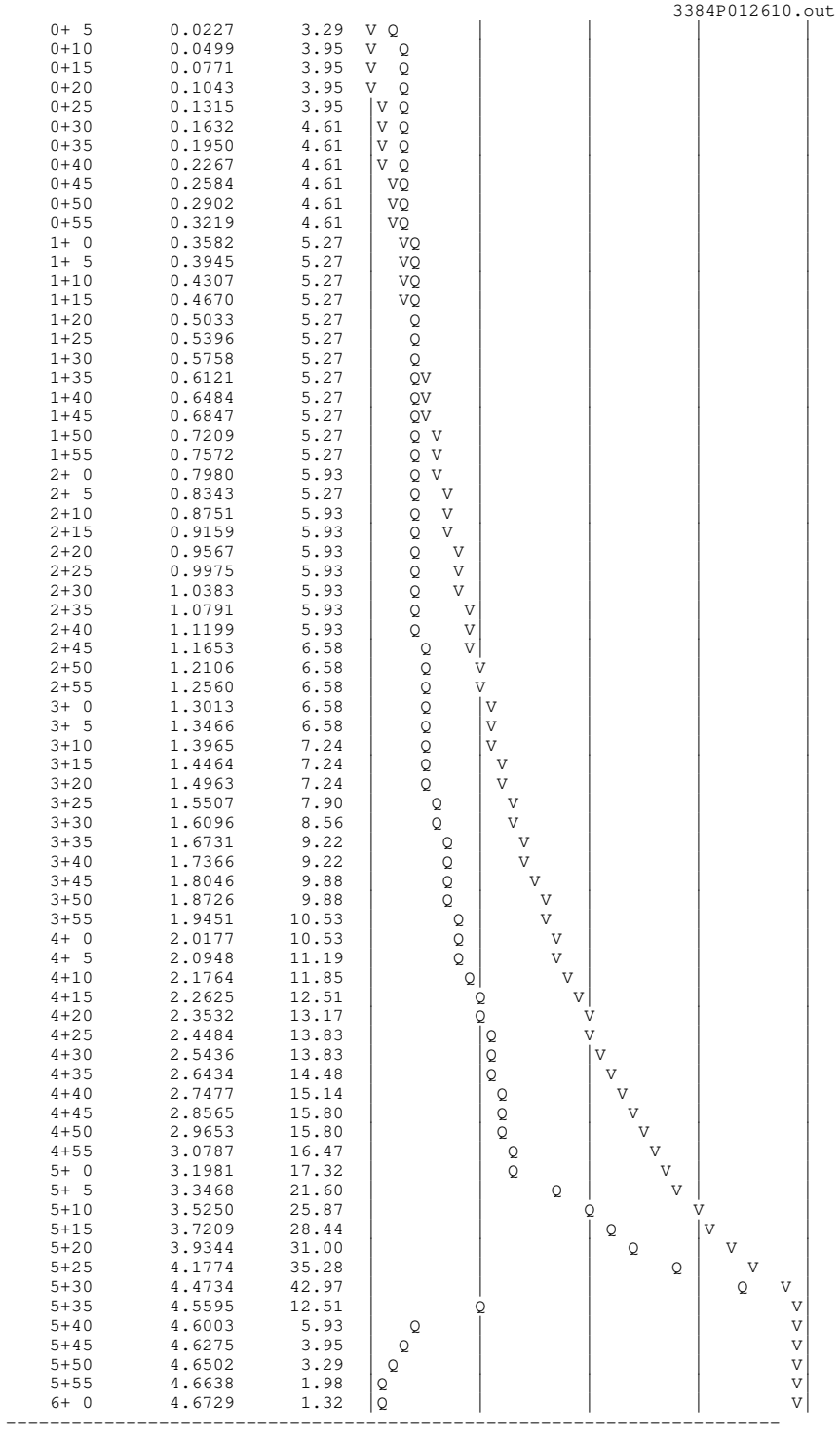
6 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	12.5	25.0	37.5	50.0



0+ 5	0.0227	3.29	
0+10	0.0499	3.95	
0+15	0.0771	3.95	
0+20	0.1043	3.95	
0+25	0.1315	3.95	
0+30	0.1632	4.61	
0+35	0.1950	4.61	
0+40	0.2267	4.61	
0+45	0.2584	4.61	
0+50	0.2902	4.61	
0+55	0.3219	4.61	
1+ 0	0.3582	5.27	
1+ 5	0.3945	5.27	
1+10	0.4307	5.27	
1+15	0.4670	5.27	
1+20	0.5033	5.27	
1+25	0.5396	5.27	
1+30	0.5758	5.27	
1+35	0.6121	5.27	
1+40	0.6484	5.27	
1+45	0.6847	5.27	
1+50	0.7209	5.27	
1+55	0.7572	5.27	
2+ 0	0.7980	5.93	
2+ 5	0.8343	5.27	
2+10	0.8751	5.93	
2+15	0.9159	5.93	
2+20	0.9567	5.93	
2+25	0.9975	5.93	
2+30	1.0383	5.93	
2+35	1.0791	5.93	
2+40	1.1199	5.93	
2+45	1.1653	6.58	
2+50	1.2106	6.58	
2+55	1.2560	6.58	
3+ 0	1.3013	6.58	
3+ 5	1.3466	6.58	
3+10	1.3965	7.24	
3+15	1.4464	7.24	
3+20	1.4963	7.24	
3+25	1.5507	7.90	
3+30	1.6096	8.56	
3+35	1.6731	9.22	
3+40	1.7366	9.22	
3+45	1.8046	9.88	
3+50	1.8726	9.88	
3+55	1.9451	10.53	
4+ 0	2.0177	10.53	
4+ 5	2.0948	11.19	
4+10	2.1764	11.85	
4+15	2.2625	12.51	
4+20	2.3532	13.17	
4+25	2.4484	13.83	
4+30	2.5436	13.83	
4+35	2.6434	14.48	
4+40	2.7477	15.14	
4+45	2.8565	15.80	
4+50	2.9653	15.80	
4+55	3.0787	16.47	
5+ 0	3.1981	17.32	
5+ 5	3.3468	21.60	
5+10	3.5250	25.87	
5+15	3.7209	28.44	
5+20	3.9344	31.00	
5+25	4.1774	35.28	
5+30	4.4734	42.97	
5+35	4.5595	12.51	
5+40	4.6003	5.93	
5+45	4.6275	3.95	
5+50	4.6502	3.29	
5+55	4.6638	1.98	
6+ 0	4.6729	1.32	

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

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Study date 06/20/23 File: 2219P0122410.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

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English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 1 & 2 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.00	78.80

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	5.50	216.70

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 3.440(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 3.440(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	77.0	0.279	0.000	0.279	0.067	0.019
32.0	32.0	0.742	0.900	0.141	0.552	0.078
69.0	69.0	0.373	0.900	0.071	0.379	0.027
75.0	75.0	0.303	0.900	0.058	0.003	0.000
					Sum (F) =	0.123

Area averaged mean soil loss (F) (In/Hr) = 0.123
Minimum soil loss rate ((In/Hr)) = 0.062
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	39.708
		Sum =	100.000 Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss

rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.028	(0.219)	0.006	0.021
2	0.17	0.07	0.028	(0.218)	0.006	0.021
3	0.25	0.07	0.028	(0.217)	0.006	0.021
4	0.33	0.10	0.041	(0.216)	0.009	0.032
5	0.42	0.10	0.041	(0.216)	0.009	0.032
6	0.50	0.10	0.041	(0.215)	0.009	0.032
7	0.58	0.10	0.041	(0.214)	0.009	0.032
8	0.67	0.10	0.041	(0.213)	0.009	0.032
9	0.75	0.10	0.041	(0.212)	0.009	0.032
10	0.83	0.13	0.055	(0.211)	0.013	0.042
11	0.92	0.13	0.055	(0.211)	0.013	0.042
12	1.00	0.13	0.055	(0.210)	0.013	0.042
13	1.08	0.10	0.041	(0.209)	0.009	0.032
14	1.17	0.10	0.041	(0.208)	0.009	0.032
15	1.25	0.10	0.041	(0.207)	0.009	0.032
16	1.33	0.10	0.041	(0.206)	0.009	0.032
17	1.42	0.10	0.041	(0.206)	0.009	0.032
18	1.50	0.10	0.041	(0.205)	0.009	0.032
19	1.58	0.10	0.041	(0.204)	0.009	0.032
20	1.67	0.10	0.041	(0.203)	0.009	0.032
21	1.75	0.10	0.041	(0.202)	0.009	0.032
22	1.83	0.13	0.055	(0.201)	0.013	0.042
23	1.92	0.13	0.055	(0.201)	0.013	0.042
24	2.00	0.13	0.055	(0.200)	0.013	0.042
25	2.08	0.13	0.055	(0.199)	0.013	0.042
26	2.17	0.13	0.055	(0.198)	0.013	0.042
27	2.25	0.13	0.055	(0.197)	0.013	0.042
28	2.33	0.13	0.055	(0.197)	0.013	0.042
29	2.42	0.13	0.055	(0.196)	0.013	0.042
30	2.50	0.13	0.055	(0.195)	0.013	0.042
31	2.58	0.17	0.069	(0.194)	0.016	0.053
32	2.67	0.17	0.069	(0.193)	0.016	0.053
33	2.75	0.17	0.069	(0.193)	0.016	0.053
34	2.83	0.17	0.069	(0.192)	0.016	0.053
35	2.92	0.17	0.069	(0.191)	0.016	0.053
36	3.00	0.17	0.069	(0.190)	0.016	0.053
37	3.08	0.17	0.069	(0.189)	0.016	0.053
38	3.17	0.17	0.069	(0.189)	0.016	0.053
39	3.25	0.17	0.069	(0.188)	0.016	0.053
40	3.33	0.17	0.069	(0.187)	0.016	0.053
41	3.42	0.17	0.069	(0.186)	0.016	0.053
42	3.50	0.17	0.069	(0.186)	0.016	0.053
43	3.58	0.17	0.069	(0.185)	0.016	0.053
44	3.67	0.17	0.069	(0.184)	0.016	0.053
45	3.75	0.17	0.069	(0.183)	0.016	0.053
46	3.83	0.20	0.083	(0.182)	0.019	0.064
47	3.92	0.20	0.083	(0.182)	0.019	0.064
48	4.00	0.20	0.083	(0.181)	0.019	0.064
49	4.08	0.20	0.083	(0.180)	0.019	0.064
50	4.17	0.20	0.083	(0.179)	0.019	0.064
51	4.25	0.20	0.083	(0.179)	0.019	0.064
52	4.33	0.23	0.096	(0.178)	0.022	0.074
53	4.42	0.23	0.096	(0.177)	0.022	0.074
54	4.50	0.23	0.096	(0.176)	0.022	0.074
55	4.58	0.23	0.096	(0.176)	0.022	0.074
56	4.67	0.23	0.096	(0.175)	0.022	0.074
57	4.75	0.23	0.096	(0.174)	0.022	0.074
58	4.83	0.27	0.110	(0.173)	0.025	0.085
59	4.92	0.27	0.110	(0.173)	0.025	0.085
60	5.00	0.27	0.110	(0.172)	0.025	0.085
61	5.08	0.20	0.083	(0.171)	0.019	0.064
62	5.17	0.20	0.083	(0.170)	0.019	0.064
63	5.25	0.20	0.083	(0.170)	0.019	0.064
64	5.33	0.23	0.096	(0.169)	0.022	0.074
65	5.42	0.23	0.096	(0.168)	0.022	0.074
66	5.50	0.23	0.096	(0.167)	0.022	0.074
67	5.58	0.27	0.110	(0.167)	0.025	0.085
68	5.67	0.27	0.110	(0.166)	0.025	0.085
69	5.75	0.27	0.110	(0.165)	0.025	0.085
70	5.83	0.27	0.110	(0.164)	0.025	0.085
71	5.92	0.27	0.110	(0.164)	0.025	0.085
72	6.00	0.27	0.110	(0.163)	0.025	0.085
73	6.08	0.30	0.124	(0.162)	0.028	0.095
74	6.17	0.30	0.124	(0.162)	0.028	0.095
75	6.25	0.30	0.124	(0.161)	0.028	0.095
76	6.33	0.30	0.124	(0.160)	0.028	0.095
77	6.42	0.30	0.124	(0.159)	0.028	0.095
78	6.50	0.30	0.124	(0.159)	0.028	0.095
79	6.58	0.33	0.138	(0.158)	0.032	0.106
80	6.67	0.33	0.138	(0.157)	0.032	0.106
81	6.75	0.33	0.138	(0.157)	0.032	0.106
82	6.83	0.33	0.138	(0.156)	0.032	0.106
83	6.92	0.33	0.138	(0.155)	0.032	0.106
84	7.00	0.33	0.138	(0.154)	0.032	0.106
85	7.08	0.33	0.138	(0.154)	0.032	0.106
86	7.17	0.33	0.138	(0.153)	0.032	0.106
87	7.25	0.33	0.138	(0.152)	0.032	0.106
88	7.33	0.37	0.151	(0.152)	0.035	0.117
89	7.42	0.37	0.151	(0.151)	0.035	0.117
90	7.50	0.37	0.151	(0.150)	0.035	0.117
91	7.58	0.40	0.165	(0.150)	0.038	0.127
92	7.67	0.40	0.165	(0.149)	0.038	0.127
93	7.75	0.40	0.165	(0.148)	0.038	0.127

94	7.83	0.43	0.179	(	0.147)	0.041		0.138
95	7.92	0.43	0.179	(	0.147)	0.041		0.138
96	8.00	0.43	0.179	(	0.146)	0.041		0.138
97	8.08	0.50	0.206	(	0.145)	0.047		0.159
98	8.17	0.50	0.206	(	0.145)	0.047		0.159
99	8.25	0.50	0.206	(	0.144)	0.047		0.159
100	8.33	0.50	0.206	(	0.143)	0.047		0.159
101	8.42	0.50	0.206	(	0.143)	0.047		0.159
102	8.50	0.50	0.206	(	0.142)	0.047		0.159
103	8.58	0.53	0.220	(	0.141)	0.051		0.170
104	8.67	0.53	0.220	(	0.141)	0.051		0.170
105	8.75	0.53	0.220	(	0.140)	0.051		0.170
106	8.83	0.57	0.234	(	0.139)	0.054		0.180
107	8.92	0.57	0.234	(	0.139)	0.054		0.180
108	9.00	0.57	0.234	(	0.138)	0.054		0.180
109	9.08	0.63	0.261	(	0.137)	0.060		0.201
110	9.17	0.63	0.261	(	0.137)	0.060		0.201
111	9.25	0.63	0.261	(	0.136)	0.060		0.201
112	9.33	0.67	0.275	(	0.136)	0.063		0.212
113	9.42	0.67	0.275	(	0.135)	0.063		0.212
114	9.50	0.67	0.275	(	0.134)	0.063		0.212
115	9.58	0.70	0.289	(	0.134)	0.066		0.222
116	9.67	0.70	0.289	(	0.133)	0.066		0.222
117	9.75	0.70	0.289	(	0.132)	0.066		0.222
118	9.83	0.73	0.303	(	0.132)	0.070		0.233
119	9.92	0.73	0.303	(	0.131)	0.070		0.233
120	10.00	0.73	0.303	(	0.130)	0.070		0.233
121	10.08	0.50	0.206	(	0.130)	0.047		0.159
122	10.17	0.50	0.206	(	0.129)	0.047		0.159
123	10.25	0.50	0.206	(	0.129)	0.047		0.159
124	10.33	0.50	0.206	(	0.128)	0.047		0.159
125	10.42	0.50	0.206	(	0.127)	0.047		0.159
126	10.50	0.50	0.206	(	0.127)	0.047		0.159
127	10.58	0.67	0.275	(	0.126)	0.063		0.212
128	10.67	0.67	0.275	(	0.125)	0.063		0.212
129	10.75	0.67	0.275	(	0.125)	0.063		0.212
130	10.83	0.67	0.275	(	0.124)	0.063		0.212
131	10.92	0.67	0.275	(	0.124)	0.063		0.212
132	11.00	0.67	0.275	(	0.123)	0.063		0.212
133	11.08	0.63	0.261	(	0.122)	0.060		0.201
134	11.17	0.63	0.261	(	0.122)	0.060		0.201
135	11.25	0.63	0.261	(	0.121)	0.060		0.201
136	11.33	0.63	0.261	(	0.121)	0.060		0.201
137	11.42	0.63	0.261	(	0.120)	0.060		0.201
138	11.50	0.63	0.261	(	0.119)	0.060		0.201
139	11.58	0.57	0.234	(	0.119)	0.054		0.180
140	11.67	0.57	0.234	(	0.118)	0.054		0.180
141	11.75	0.57	0.234	(	0.118)	0.054		0.180
142	11.83	0.60	0.248	(	0.117)	0.057		0.191
143	11.92	0.60	0.248	(	0.116)	0.057		0.191
144	12.00	0.60	0.248	(	0.116)	0.057		0.191
145	12.08	0.83	0.344	(	0.115)	0.079		0.265
146	12.17	0.83	0.344	(	0.115)	0.079		0.265
147	12.25	0.83	0.344	(	0.114)	0.079		0.265
148	12.33	0.87	0.358	(	0.114)	0.082		0.275
149	12.42	0.87	0.358	(	0.113)	0.082		0.275
150	12.50	0.87	0.358	(	0.112)	0.082		0.275
151	12.58	0.93	0.385	(	0.112)	0.089		0.297
152	12.67	0.93	0.385	(	0.111)	0.089		0.297
153	12.75	0.93	0.385	(	0.111)	0.089		0.297
154	12.83	0.97	0.399	(	0.110)	0.092		0.307
155	12.92	0.97	0.399	(	0.110)	0.092		0.307
156	13.00	0.97	0.399	(	0.109)	0.092		0.307
157	13.08	1.13	0.468	(	0.108)	0.108		0.360
158	13.17	1.13	0.468	(	0.108)	0.108		0.360
159	13.25	1.13	0.468		0.107	(0.108)		0.360
160	13.33	1.13	0.468		0.107	(0.108)		0.361
161	13.42	1.13	0.468		0.106	(0.108)		0.361
162	13.50	1.13	0.468		0.106	(0.108)		0.362
163	13.58	0.77	0.316	(	0.105)	0.073		0.244
164	13.67	0.77	0.316	(	0.105)	0.073		0.244
165	13.75	0.77	0.316	(	0.104)	0.073		0.244
166	13.83	0.77	0.316	(	0.104)	0.073		0.244
167	13.92	0.77	0.316	(	0.103)	0.073		0.244
168	14.00	0.77	0.316	(	0.103)	0.073		0.244
169	14.08	0.90	0.371	(	0.102)	0.085		0.286
170	14.17	0.90	0.371	(	0.102)	0.085		0.286
171	14.25	0.90	0.371	(	0.101)	0.085		0.286
172	14.33	0.87	0.358	(	0.100)	0.082		0.275
173	14.42	0.87	0.358	(	0.100)	0.082		0.275
174	14.50	0.87	0.358	(	0.099)	0.082		0.275
175	14.58	0.87	0.358	(	0.099)	0.082		0.275
176	14.67	0.87	0.358	(	0.098)	0.082		0.275
177	14.75	0.87	0.358	(	0.098)	0.082		0.275
178	14.83	0.83	0.344	(	0.097)	0.079		0.265
179	14.92	0.83	0.344	(	0.097)	0.079		0.265
180	15.00	0.83	0.344	(	0.096)	0.079		0.265
181	15.08	0.80	0.330	(	0.096)	0.076		0.254
182	15.17	0.80	0.330	(	0.095)	0.076		0.254
183	15.25	0.80	0.330	(	0.095)	0.076		0.254
184	15.33	0.77	0.316	(	0.094)	0.073		0.244
185	15.42	0.77	0.316	(	0.094)	0.073		0.244
186	15.50	0.77	0.316	(	0.094)	0.073		0.244
187	15.58	0.63	0.261	(	0.093)	0.060		0.201
188	15.67	0.63	0.261	(	0.093)	0.060		0.201
189	15.75	0.63	0.261	(	0.092)	0.060		0.201
190	15.83	0.63	0.261	(	0.092)	0.060		0.201

191	15.92	0.63	0.261	(0.091)	0.060	0.201
192	16.00	0.63	0.261	(0.091)	0.060	0.201
193	16.08	0.13	0.055	(0.090)	0.013	0.042
194	16.17	0.13	0.055	(0.090)	0.013	0.042
195	16.25	0.13	0.055	(0.089)	0.013	0.042
196	16.33	0.13	0.055	(0.089)	0.013	0.042
197	16.42	0.13	0.055	(0.088)	0.013	0.042
198	16.50	0.13	0.055	(0.088)	0.013	0.042
199	16.58	0.10	0.041	(0.087)	0.009	0.032
200	16.67	0.10	0.041	(0.087)	0.009	0.032
201	16.75	0.10	0.041	(0.087)	0.009	0.032
202	16.83	0.10	0.041	(0.086)	0.009	0.032
203	16.92	0.10	0.041	(0.086)	0.009	0.032
204	17.00	0.10	0.041	(0.085)	0.009	0.032
205	17.08	0.17	0.069	(0.085)	0.016	0.053
206	17.17	0.17	0.069	(0.084)	0.016	0.053
207	17.25	0.17	0.069	(0.084)	0.016	0.053
208	17.33	0.17	0.069	(0.084)	0.016	0.053
209	17.42	0.17	0.069	(0.083)	0.016	0.053
210	17.50	0.17	0.069	(0.083)	0.016	0.053
211	17.58	0.17	0.069	(0.082)	0.016	0.053
212	17.67	0.17	0.069	(0.082)	0.016	0.053
213	17.75	0.17	0.069	(0.082)	0.016	0.053
214	17.83	0.13	0.055	(0.081)	0.013	0.042
215	17.92	0.13	0.055	(0.081)	0.013	0.042
216	18.00	0.13	0.055	(0.080)	0.013	0.042
217	18.08	0.13	0.055	(0.080)	0.013	0.042
218	18.17	0.13	0.055	(0.080)	0.013	0.042
219	18.25	0.13	0.055	(0.079)	0.013	0.042
220	18.33	0.13	0.055	(0.079)	0.013	0.042
221	18.42	0.13	0.055	(0.078)	0.013	0.042
222	18.50	0.13	0.055	(0.078)	0.013	0.042
223	18.58	0.10	0.041	(0.078)	0.009	0.032
224	18.67	0.10	0.041	(0.077)	0.009	0.032
225	18.75	0.10	0.041	(0.077)	0.009	0.032
226	18.83	0.07	0.028	(0.076)	0.006	0.021
227	18.92	0.07	0.028	(0.076)	0.006	0.021
228	19.00	0.07	0.028	(0.076)	0.006	0.021
229	19.08	0.10	0.041	(0.075)	0.009	0.032
230	19.17	0.10	0.041	(0.075)	0.009	0.032
231	19.25	0.10	0.041	(0.075)	0.009	0.032
232	19.33	0.13	0.055	(0.074)	0.013	0.042
233	19.42	0.13	0.055	(0.074)	0.013	0.042
234	19.50	0.13	0.055	(0.074)	0.013	0.042
235	19.58	0.10	0.041	(0.073)	0.009	0.032
236	19.67	0.10	0.041	(0.073)	0.009	0.032
237	19.75	0.10	0.041	(0.073)	0.009	0.032
238	19.83	0.07	0.028	(0.072)	0.006	0.021
239	19.92	0.07	0.028	(0.072)	0.006	0.021
240	20.00	0.07	0.028	(0.072)	0.006	0.021
241	20.08	0.10	0.041	(0.071)	0.009	0.032
242	20.17	0.10	0.041	(0.071)	0.009	0.032
243	20.25	0.10	0.041	(0.071)	0.009	0.032
244	20.33	0.10	0.041	(0.070)	0.009	0.032
245	20.42	0.10	0.041	(0.070)	0.009	0.032
246	20.50	0.10	0.041	(0.070)	0.009	0.032
247	20.58	0.10	0.041	(0.070)	0.009	0.032
248	20.67	0.10	0.041	(0.069)	0.009	0.032
249	20.75	0.10	0.041	(0.069)	0.009	0.032
250	20.83	0.07	0.028	(0.069)	0.006	0.021
251	20.92	0.07	0.028	(0.068)	0.006	0.021
252	21.00	0.07	0.028	(0.068)	0.006	0.021
253	21.08	0.10	0.041	(0.068)	0.009	0.032
254	21.17	0.10	0.041	(0.068)	0.009	0.032
255	21.25	0.10	0.041	(0.067)	0.009	0.032
256	21.33	0.07	0.028	(0.067)	0.006	0.021
257	21.42	0.07	0.028	(0.067)	0.006	0.021
258	21.50	0.07	0.028	(0.067)	0.006	0.021
259	21.58	0.10	0.041	(0.066)	0.009	0.032
260	21.67	0.10	0.041	(0.066)	0.009	0.032
261	21.75	0.10	0.041	(0.066)	0.009	0.032
262	21.83	0.07	0.028	(0.066)	0.006	0.021
263	21.92	0.07	0.028	(0.065)	0.006	0.021
264	22.00	0.07	0.028	(0.065)	0.006	0.021
265	22.08	0.10	0.041	(0.065)	0.009	0.032
266	22.17	0.10	0.041	(0.065)	0.009	0.032
267	22.25	0.10	0.041	(0.065)	0.009	0.032
268	22.33	0.07	0.028	(0.064)	0.006	0.021
269	22.42	0.07	0.028	(0.064)	0.006	0.021
270	22.50	0.07	0.028	(0.064)	0.006	0.021
271	22.58	0.07	0.028	(0.064)	0.006	0.021
272	22.67	0.07	0.028	(0.064)	0.006	0.021
273	22.75	0.07	0.028	(0.063)	0.006	0.021
274	22.83	0.07	0.028	(0.063)	0.006	0.021
275	22.92	0.07	0.028	(0.063)	0.006	0.021
276	23.00	0.07	0.028	(0.063)	0.006	0.021
277	23.08	0.07	0.028	(0.063)	0.006	0.021
278	23.17	0.07	0.028	(0.063)	0.006	0.021
279	23.25	0.07	0.028	(0.063)	0.006	0.021
280	23.33	0.07	0.028	(0.062)	0.006	0.021
281	23.42	0.07	0.028	(0.062)	0.006	0.021
282	23.50	0.07	0.028	(0.062)	0.006	0.021
283	23.58	0.07	0.028	(0.062)	0.006	0.021
284	23.67	0.07	0.028	(0.062)	0.006	0.021
285	23.75	0.07	0.028	(0.062)	0.006	0.021
286	23.83	0.07	0.028	(0.062)	0.006	0.021
287	23.92	0.07	0.028	(0.062)	0.006	0.021

288 24.00 0.07 0.028 (0.062) 0.006 0.021
(Loss Rate Not Used)
Sum = 100.0 Sum = 31.8
Flood volume = Effective rainfall 2.65(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 8.7(Ac.Ft)
Total soil loss = 0.79(In)
Total soil loss = 2.596(Ac.Ft)
Total rainfall = 3.44(In)
Flood volume = 378848.1 Cubic Feet
Total soil loss = 113099.5 Cubic Feet

Peak flow rate of this hydrograph = 14.383(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	0.0058	0.84	VQ
0+10	0.0116	0.84	VQ
0+15	0.0174	0.84	VQ
0+20	0.0261	1.26	V Q
0+25	0.0348	1.26	V Q
0+30	0.0435	1.26	V Q
0+35	0.0522	1.26	V Q
0+40	0.0609	1.26	V Q
0+45	0.0696	1.26	V Q
0+50	0.0812	1.68	V Q
0+55	0.0928	1.68	V Q
1+ 0	0.1044	1.68	V Q
1+ 5	0.1130	1.26	V Q
1+10	0.1217	1.26	V Q
1+15	0.1304	1.26	V Q
1+20	0.1391	1.26	V Q
1+25	0.1478	1.26	V Q
1+30	0.1565	1.26	V Q
1+35	0.1652	1.26	V Q
1+40	0.1739	1.26	V Q
1+45	0.1826	1.26	V Q
1+50	0.1942	1.68	V Q
1+55	0.2058	1.68	V Q
2+ 0	0.2174	1.68	V Q
2+ 5	0.2290	1.68	V Q
2+10	0.2406	1.68	V Q
2+15	0.2522	1.68	V Q
2+20	0.2638	1.68	V Q
2+25	0.2754	1.68	V Q
2+30	0.2870	1.68	V Q
2+35	0.3015	2.10	V Q
2+40	0.3160	2.10	V Q
2+45	0.3304	2.10	V Q
2+50	0.3449	2.10	V Q
2+55	0.3594	2.10	V Q
3+ 0	0.3739	2.10	V Q
3+ 5	0.3884	2.10	V Q
3+10	0.4029	2.10	V Q
3+15	0.4174	2.10	V Q
3+20	0.4319	2.10	V Q
3+25	0.4464	2.10	V Q
3+30	0.4609	2.10	V Q
3+35	0.4754	2.10	V Q
3+40	0.4899	2.10	V Q
3+45	0.5044	2.10	V Q
3+50	0.5218	2.53	V Q
3+55	0.5392	2.53	V Q
4+ 0	0.5565	2.53	V Q
4+ 5	0.5739	2.53	V Q
4+10	0.5913	2.53	V Q
4+15	0.6087	2.53	V Q
4+20	0.6290	2.95	V Q
4+25	0.6493	2.95	V Q
4+30	0.6696	2.95	V Q
4+35	0.6899	2.95	V Q
4+40	0.7102	2.95	V Q
4+45	0.7305	2.95	V Q
4+50	0.7537	3.37	V Q
4+55	0.7768	3.37	V Q
5+ 0	0.8000	3.37	V Q
5+ 5	0.8174	2.53	V Q
5+10	0.8348	2.53	V Q
5+15	0.8522	2.53	V Q
5+20	0.8725	2.95	VQ
5+25	0.8928	2.95	VQ
5+30	0.9131	2.95	VQ
5+35	0.9363	3.37	V Q
5+40	0.9595	3.37	V Q
5+45	0.9827	3.37	V Q
5+50	1.0058	3.37	V Q
5+55	1.0290	3.37	V Q
6+ 0	1.0522	3.37	V Q
6+ 5	1.0783	3.79	V Q
6+10	1.1044	3.79	V Q
6+15	1.1305	3.79	V Q

6+20	1.1566	3.79	V Q
6+25	1.1827	3.79	V Q
6+30	1.2087	3.79	V Q
6+35	1.2377	4.21	V Q
6+40	1.2667	4.21	V Q
6+45	1.2957	4.21	V Q
6+50	1.3247	4.21	V Q
6+55	1.3537	4.21	V Q
7+ 0	1.3827	4.21	V Q
7+ 5	1.4117	4.21	V Q
7+10	1.4406	4.21	V Q
7+15	1.4696	4.21	V Q
7+20	1.5015	4.63	V Q
7+25	1.5334	4.63	V Q
7+30	1.5653	4.63	V Q
7+35	1.6001	5.05	V Q
7+40	1.6349	5.05	V Q
7+45	1.6696	5.05	V Q
7+50	1.7073	5.47	V Q
7+55	1.7450	5.47	V Q
8+ 0	1.7827	5.47	V Q
8+ 5	1.8262	6.31	V Q
8+10	1.8696	6.31	V Q
8+15	1.9131	6.31	V Q
8+20	1.9566	6.31	V Q
8+25	2.0001	6.31	V Q
8+30	2.0436	6.31	V Q
8+35	2.0899	6.73	V Q
8+40	2.1363	6.73	V Q
8+45	2.1827	6.73	V Q
8+50	2.2320	7.16	V Q
8+55	2.2813	7.16	V Q
9+ 0	2.3305	7.16	V Q
9+ 5	2.3856	8.00	V Q
9+10	2.4407	8.00	V Q
9+15	2.4958	8.00	V Q
9+20	2.5537	8.42	V Q
9+25	2.6117	8.42	V Q
9+30	2.6697	8.42	V Q
9+35	2.7306	8.84	V Q
9+40	2.7914	8.84	V Q
9+45	2.8523	8.84	V Q
9+50	2.9161	9.26	V Q
9+55	2.9798	9.26	V Q
10+ 0	3.0436	9.26	V Q
10+ 5	3.0871	6.31	Q V
10+10	3.1306	6.31	Q V
10+15	3.1741	6.31	Q V
10+20	3.2175	6.31	Q V
10+25	3.2610	6.31	Q V
10+30	3.3045	6.31	Q V
10+35	3.3625	8.42	VQ
10+40	3.4204	8.42	VQ
10+45	3.4784	8.42	VQ
10+50	3.5364	8.42	Q
10+55	3.5944	8.42	Q
11+ 0	3.6523	8.42	Q
11+ 5	3.7074	8.00	Q V
11+10	3.7625	8.00	Q V
11+15	3.8176	8.00	Q V
11+20	3.8726	8.00	Q V
11+25	3.9277	8.00	Q V
11+30	3.9828	8.00	Q V
11+35	4.0321	7.16	Q V
11+40	4.0813	7.16	Q V
11+45	4.1306	7.16	Q V
11+50	4.1828	7.58	Q V
11+55	4.2350	7.58	Q V
12+ 0	4.2871	7.58	Q V
12+ 5	4.3596	10.52	VQ
12+10	4.4321	10.52	VQ
12+15	4.5046	10.52	VQ
12+20	4.5799	10.94	Q
12+25	4.6553	10.94	Q
12+30	4.7306	10.94	Q
12+35	4.8118	11.78	VQ
12+40	4.8930	11.78	VQ
12+45	4.9741	11.78	VQ
12+50	5.0582	12.21	VQ
12+55	5.1423	12.21	VQ
13+ 0	5.2263	12.21	Q
13+ 5	5.3249	14.31	V Q
13+10	5.4234	14.31	V Q
13+15	5.5220	14.32	V Q
13+20	5.6208	14.34	V Q
13+25	5.7197	14.36	V Q
13+30	5.8188	14.38	V Q
13+35	5.8854	9.68	Q V
13+40	5.9521	9.68	Q V
13+45	6.0188	9.68	Q V
13+50	6.0854	9.68	Q V
13+55	6.1521	9.68	Q V
14+ 0	6.2188	9.68	Q V
14+ 5	6.2970	11.36	Q V
14+10	6.3753	11.36	Q V
14+15	6.4536	11.36	Q V
14+20	6.5289	10.94	Q V

| | | |

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   22+30       8.5928      0.84 |Q          |           |           |          V|
   22+35       8.5986      0.84 |Q          |           |           |          V|
   22+40       8.6044      0.84 |Q          |           |           |          V|
   22+45       8.6102      0.84 |Q          |           |           |          V|
   22+50       8.6160      0.84 |Q          |           |           |          V|
   22+55       8.6218      0.84 |Q          |           |           |          V|
   23+ 0       8.6276      0.84 |Q          |           |           |          V|
   23+ 5       8.6334      0.84 |Q          |           |           |          V|
   23+10       8.6392      0.84 |Q          |           |           |          V|
   23+15       8.6450      0.84 |Q          |           |           |          V|
   23+20       8.6508      0.84 |Q          |           |           |          V|
   23+25       8.6566      0.84 |Q          |           |           |          V|
   23+30       8.6624      0.84 |Q          |           |           |          V|
   23+35       8.6682      0.84 |Q          |           |           |          V|
   23+40       8.6740      0.84 |Q          |           |           |          V|
   23+45       8.6798      0.84 |Q          |           |           |          V|
   23+50       8.6856      0.84 |Q          |           |           |          V|
   23+55       8.6914      0.84 |Q          |           |           |          V|
   24+ 0       8.6972      0.84 |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

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Study date 06/20/23 File: 2219P034110.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.52	12.42

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.15	27.47

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 0.779(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 0.779(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
32.0	32.0	0.742	0.900	0.141	0.616	0.087
69.0	69.0	0.373	0.900	0.071	0.062	0.004
75.0	75.0	0.303	0.900	0.058	0.216	0.012
					Sum (F) =	0.150

Area averaged mean soil loss (F) (In/Hr) = 0.150
Minimum soil loss rate ((In/Hr)) = 0.075
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

```
          1   0.083          1.#IO        100.000             24.077
                                     Sum = 100.000   Sum=      24.077
-----------------------------------------------------------------------


 The following loss rate calculations reflect use of the minimum calculated loss
 rate subtracted from the Storm Rain to produce the maximum Effective Rain value

  Unit Time   Pattern   Storm Rain     Loss rate(In./Hr)     Effective
       (Hr.)  Percent   (In/Hr)         Max   |   Low        (In/Hr)
   1   0.08     4.10      0.383       (  0.150)       0.100        0.284
   2   0.17     4.60      0.430       (  0.150)       0.112        0.318
   3   0.25     4.50      0.421       (  0.150)       0.109        0.311
   4   0.33     4.90      0.458       (  0.150)       0.119        0.339
   5   0.42     5.50      0.514       (  0.150)       0.134        0.380
   6   0.50     6.40      0.598          0.150    (  0.156)        0.448
   7   0.58     7.10      0.664          0.150    (  0.173)        0.513
   8   0.67     9.00      0.841          0.150    (  0.219)        0.691
   9   0.75    12.90      1.206          0.150    (  0.314)        1.056
  10   0.83    29.50      2.758          0.150    (  0.717)        2.607
  11   0.92     7.00      0.654          0.150    (  0.170)        0.504
  12   1.00     4.50      0.421       (  0.150)       0.109        0.311
                 (Loss Rate Not Used)
     Sum =     100.0                                  Sum =     7.8
        Flood volume = Effective rainfall      0.65(In)
         times area      23.9(Ac.)/[(In)/(Ft.)] =       1.3(Ac.Ft)
        Total soil loss =      0.13(In)
        Total soil loss =     0.263(Ac.Ft)
        Total rainfall =      0.78(In)
        Flood volume =       56101.1 Cubic Feet
        Total soil loss =       11455.9 Cubic Feet
        ---------------------------------------------------------------------
         Peak flow rate of this hydrograph =     62.809(CFS)
        ---------------------------------------------------------------------
        +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                           1 - 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       17.5      35.0      52.5      70.0
  ---------------------------------------------------------------------
    0+ 5       0.0471      6.83  |V Q      |         |         |         |
    0+10       0.0998      7.67  |  VQ     |         |         |         |
    0+15       0.1515      7.50  |   Q     |         |         |         |
    0+20       0.2077      8.17  |   Q V   |         |         |         |
    0+25       0.2708      9.17  |    Q  V |         |         |         |
    0+30       0.3452     10.79  |     Q   V         |         |         |
    0+35       0.4303     12.37  |      Q  |  V      |         |         |
    0+40       0.5450     16.64  |        Q|     V   |         |         |
    0+45       0.7201     25.43  |         |   Q     | V       |         |
    0+50       1.1526     62.81  |         |         |         |    Q    |
    0+55       1.2363     12.14  |     Q   |         |         |       V |
    1+ 0       1.2879      7.50  |   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

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Study date 06/20/23 File: 2219P034310.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.95	22.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.90	45.39

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.341(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.341(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
32.0	32.0	0.742	0.900	0.141	0.616	0.087
69.0	69.0	0.373	0.900	0.071	0.062	0.004
75.0	75.0	0.303	0.900	0.058	0.216	0.012
					Sum (F) =	0.150

Area averaged mean soil loss (F) (In/Hr) = 0.150
Minimum soil loss rate ((In/Hr)) = 0.075
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.209	(0.150)	0.054	0.155
2	0.17	1.30	0.209	(0.150)	0.054	0.155
3	0.25	1.10	0.177	(0.150)	0.046	0.131
4	0.33	1.50	0.241	(0.150)	0.063	0.179
5	0.42	1.50	0.241	(0.150)	0.063	0.179
6	0.50	1.80	0.290	(0.150)	0.075	0.214
7	0.58	1.50	0.241	(0.150)	0.063	0.179
8	0.67	1.80	0.290	(0.150)	0.075	0.214
9	0.75	1.80	0.290	(0.150)	0.075	0.214
10	0.83	1.50	0.241	(0.150)	0.063	0.179
11	0.92	1.60	0.257	(0.150)	0.067	0.190
12	1.00	1.80	0.290	(0.150)	0.075	0.214
13	1.08	2.20	0.354	(0.150)	0.092	0.262
14	1.17	2.20	0.354	(0.150)	0.092	0.262
15	1.25	2.20	0.354	(0.150)	0.092	0.262
16	1.33	2.00	0.322	(0.150)	0.084	0.238
17	1.42	2.60	0.418	(0.150)	0.109	0.310
18	1.50	2.70	0.434	(0.150)	0.113	0.321
19	1.58	2.40	0.386	(0.150)	0.100	0.286
20	1.67	2.70	0.434	(0.150)	0.113	0.321
21	1.75	3.30	0.531	(0.150)	0.138	0.393
22	1.83	3.10	0.499	(0.150)	0.130	0.369
23	1.92	2.90	0.467	(0.150)	0.121	0.345
24	2.00	3.00	0.483	(0.150)	0.125	0.357
25	2.08	3.10	0.499	(0.150)	0.130	0.369
26	2.17	4.20	0.676	0.150	(0.176)	0.525
27	2.25	5.00	0.804	0.150	(0.209)	0.654
28	2.33	3.50	0.563	(0.150)	0.146	0.417
29	2.42	6.80	1.094	0.150	(0.284)	0.944
30	2.50	7.30	1.174	0.150	(0.305)	1.024
31	2.58	8.20	1.319	0.150	(0.343)	1.169
32	2.67	5.90	0.949	0.150	(0.247)	0.799
33	2.75	2.00	0.322	(0.150)	0.084	0.238
34	2.83	1.80	0.290	(0.150)	0.075	0.214
35	2.92	1.80	0.290	(0.150)	0.075	0.214
36	3.00	0.60	0.097	(0.150)	0.025	0.071

(Loss Rate Not Used)

Sum = 100.0 Sum = 12.6

Flood volume = Effective rainfall 1.05(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 2.1(Ac.Ft)
Total soil loss = 0.29(In)
Total soil loss = 0.584(Ac.Ft)
Total rainfall = 1.34(In)
Flood volume = 90822.6 Cubic Feet
Total soil loss = 25443.6 Cubic Feet

Peak flow rate of this hydrograph = 28.157(CFS)

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3 - 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	7.5	15.0	22.5	30.0
0+ 5	0.0257	3.73	V Q				
0+10	0.0514	3.73	V Q				
0+15	0.0731	3.15	V Q				
0+20	0.1027	4.30	V Q				
0+25	0.1323	4.30	V Q				
0+30	0.1679	5.16	V Q				
0+35	0.1975	4.30	V Q				
0+40	0.2331	5.16	V Q				
0+45	0.2686	5.16	VQ				
0+50	0.2982	4.30	Q				
0+55	0.3298	4.59	Q				
1+ 0	0.3654	5.16	QV				
1+ 5	0.4089	6.31	VQ				
1+10	0.4523	6.31	Q				
1+15	0.4958	6.31	QV				
1+20	0.5353	5.74	Q V				
1+25	0.5866	7.46	Q V				
1+30	0.6399	7.74	Q V				
1+35	0.6873	6.88	Q V				
1+40	0.7407	7.74	Q V				
1+45	0.8059	9.46	Q V				
1+50	0.8671	8.89	Q V				
1+55	0.9244	8.32	Q V				
2+ 0	0.9836	8.60	Q V				
2+ 5	1.0448	8.89	Q V				
2+10	1.1320	12.65	Q V				
2+15	1.2405	15.76	Q V				
2+20	1.3096	10.04	Q V				
2+25	1.4662	22.73	V Q				
2+30	1.6361	24.67	VQ				
2+35	1.8300	28.16	V Q				
2+40	1.9625	19.24	Q V				

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    2+45       2.0020      5.74  |      Q  |          |          |        V |
    2+50       2.0376      5.16  |     Q   |          |          |         V|
    2+55       2.0731      5.16  |     Q   |          |          |         V|
    3+ 0       2.0850      1.72  | 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

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Study date 06/20/23 File: 2219P034610.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.30	31.06

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.50	59.73

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.794(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.794(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
32.0	32.0	0.742	0.900	0.141	0.616	0.087
69.0	69.0	0.373	0.900	0.071	0.062	0.004
75.0	75.0	0.303	0.900	0.058	0.216	0.012
					Sum (F) =	0.150

Area averaged mean soil loss (F) (In/Hr) = 0.150
Minimum soil loss rate ((In/Hr)) = 0.075
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.108	(0.150)	0.028	0.080
2	0.17	0.60	0.129	(0.150)	0.034	0.096
3	0.25	0.60	0.129	(0.150)	0.034	0.096
4	0.33	0.60	0.129	(0.150)	0.034	0.096
5	0.42	0.60	0.129	(0.150)	0.034	0.096
6	0.50	0.70	0.151	(0.150)	0.039	0.111
7	0.58	0.70	0.151	(0.150)	0.039	0.111
8	0.67	0.70	0.151	(0.150)	0.039	0.111
9	0.75	0.70	0.151	(0.150)	0.039	0.111
10	0.83	0.70	0.151	(0.150)	0.039	0.111
11	0.92	0.70	0.151	(0.150)	0.039	0.111
12	1.00	0.80	0.172	(0.150)	0.045	0.127
13	1.08	0.80	0.172	(0.150)	0.045	0.127
14	1.17	0.80	0.172	(0.150)	0.045	0.127
15	1.25	0.80	0.172	(0.150)	0.045	0.127
16	1.33	0.80	0.172	(0.150)	0.045	0.127
17	1.42	0.80	0.172	(0.150)	0.045	0.127
18	1.50	0.80	0.172	(0.150)	0.045	0.127
19	1.58	0.80	0.172	(0.150)	0.045	0.127
20	1.67	0.80	0.172	(0.150)	0.045	0.127
21	1.75	0.80	0.172	(0.150)	0.045	0.127
22	1.83	0.80	0.172	(0.150)	0.045	0.127
23	1.92	0.80	0.172	(0.150)	0.045	0.127
24	2.00	0.90	0.194	(0.150)	0.050	0.143
25	2.08	0.80	0.172	(0.150)	0.045	0.127
26	2.17	0.90	0.194	(0.150)	0.050	0.143
27	2.25	0.90	0.194	(0.150)	0.050	0.143
28	2.33	0.90	0.194	(0.150)	0.050	0.143
29	2.42	0.90	0.194	(0.150)	0.050	0.143
30	2.50	0.90	0.194	(0.150)	0.050	0.143
31	2.58	0.90	0.194	(0.150)	0.050	0.143
32	2.67	0.90	0.194	(0.150)	0.050	0.143
33	2.75	1.00	0.215	(0.150)	0.056	0.159
34	2.83	1.00	0.215	(0.150)	0.056	0.159
35	2.92	1.00	0.215	(0.150)	0.056	0.159
36	3.00	1.00	0.215	(0.150)	0.056	0.159
37	3.08	1.00	0.215	(0.150)	0.056	0.159
38	3.17	1.10	0.237	(0.150)	0.062	0.175
39	3.25	1.10	0.237	(0.150)	0.062	0.175
40	3.33	1.10	0.237	(0.150)	0.062	0.175
41	3.42	1.20	0.258	(0.150)	0.067	0.191
42	3.50	1.30	0.280	(0.150)	0.073	0.207
43	3.58	1.40	0.301	(0.150)	0.078	0.223
44	3.67	1.40	0.301	(0.150)	0.078	0.223
45	3.75	1.50	0.323	(0.150)	0.084	0.239
46	3.83	1.50	0.323	(0.150)	0.084	0.239
47	3.92	1.60	0.344	(0.150)	0.090	0.255
48	4.00	1.60	0.344	(0.150)	0.090	0.255
49	4.08	1.70	0.366	(0.150)	0.095	0.271
50	4.17	1.80	0.387	(0.150)	0.101	0.287
51	4.25	1.90	0.409	(0.150)	0.106	0.303
52	4.33	2.00	0.430	(0.150)	0.112	0.319
53	4.42	2.10	0.452	(0.150)	0.118	0.334
54	4.50	2.10	0.452	(0.150)	0.118	0.334
55	4.58	2.20	0.473	(0.150)	0.123	0.350
56	4.67	2.30	0.495	(0.150)	0.129	0.366
57	4.75	2.40	0.517	(0.150)	0.134	0.382
58	4.83	2.40	0.517	(0.150)	0.134	0.382
59	4.92	2.50	0.538	(0.150)	0.140	0.398
60	5.00	2.60	0.560	(0.150)	0.145	0.414
61	5.08	3.10	0.667	0.150	(0.173)	0.517
62	5.17	3.60	0.775	0.150	(0.201)	0.624
63	5.25	3.90	0.839	0.150	(0.218)	0.689
64	5.33	4.20	0.904	0.150	(0.235)	0.754
65	5.42	4.70	1.012	0.150	(0.263)	0.861
66	5.50	5.60	1.205	0.150	(0.313)	1.055
67	5.58	1.90	0.409	(0.150)	0.106	0.303
68	5.67	0.90	0.194	(0.150)	0.050	0.143
69	5.75	0.60	0.129	(0.150)	0.034	0.096
70	5.83	0.50	0.108	(0.150)	0.028	0.080
71	5.92	0.30	0.065	(0.150)	0.017	0.048
72	6.00	0.20	0.043	(0.150)	0.011	0.032

(Loss Rate Not Used)

Sum = 100.0 Sum = 16.4

Flood volume = Effective rainfall 1.37(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 2.7(Ac.Ft)
Total soil loss = 0.42(In)
Total soil loss = 0.845(Ac.Ft)
Total rainfall = 1.79(In)
Flood volume = 118727.8 Cubic Feet
Total soil loss = 36809.5 Cubic Feet

Peak flow rate of this hydrograph = 25.411(CFS)

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6 - 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	7.5	15.0	22.5	30.0
0+ 5	0.0132	1.92	V Q				
0+10	0.0291	2.30	V Q				
0+15	0.0449	2.30	V Q				
0+20	0.0608	2.30	V Q				
0+25	0.0766	2.30	V Q				
0+30	0.0951	2.69	V Q				
0+35	0.1136	2.69	V Q				
0+40	0.1321	2.69	V Q				
0+45	0.1506	2.69	VQ				
0+50	0.1691	2.69	VQ				
0+55	0.1876	2.69	VQ				
1+ 0	0.2087	3.07	VQ				
1+ 5	0.2299	3.07	VQ				
1+10	0.2510	3.07	VQ				
1+15	0.2722	3.07	VQ				
1+20	0.2933	3.07	Q				
1+25	0.3144	3.07	Q				
1+30	0.3356	3.07	Q				
1+35	0.3567	3.07	QV				
1+40	0.3778	3.07	QV				
1+45	0.3990	3.07	QV				
1+50	0.4201	3.07	Q V				
1+55	0.4413	3.07	Q V				
2+ 0	0.4650	3.45	Q V				
2+ 5	0.4862	3.07	Q V				
2+10	0.5100	3.45	Q V				
2+15	0.5337	3.45	Q V				
2+20	0.5575	3.45	Q V				
2+25	0.5813	3.45	Q V				
2+30	0.6051	3.45	Q V				
2+35	0.6289	3.45	Q V				
2+40	0.6526	3.45	Q V				
2+45	0.6791	3.84	Q V				
2+50	0.7055	3.84	Q V				
2+55	0.7319	3.84	Q V				
3+ 0	0.7583	3.84	Q V				
3+ 5	0.7848	3.84	Q V				
3+10	0.8138	4.22	Q V				
3+15	0.8429	4.22	Q V				
3+20	0.8720	4.22	Q V				
3+25	0.9037	4.60	Q V				
3+30	0.9380	4.99	Q V				
3+35	0.9750	5.37	Q V				
3+40	1.0120	5.37	Q V				
3+45	1.0516	5.75	Q V				
3+50	1.0913	5.75	Q V				
3+55	1.1335	6.14	Q V				
4+ 0	1.1758	6.14	Q V				
4+ 5	1.2207	6.52	Q V				
4+10	1.2683	6.91	Q V				
4+15	1.3185	7.29	Q V				
4+20	1.3713	7.67	Q V				
4+25	1.4268	8.06	Q V				
4+30	1.4823	8.06	Q V				
4+35	1.5404	8.44	Q V				
4+40	1.6012	8.82	Q V				
4+45	1.6646	9.21	Q V				
4+50	1.7280	9.21	Q V				
4+55	1.7941	9.59	Q V				
5+ 0	1.8628	9.98	Q V				
5+ 5	1.9485	12.45	Q V				
5+10	2.0521	15.04	Q V				
5+15	2.1665	16.60	Q V				
5+20	2.2915	18.15	Q V				
5+25	2.4343	20.75	Q V				
5+30	2.6094	25.41	Q V				
5+35	2.6596	7.29	Q V				
5+40	2.6833	3.45	Q V				
5+45	2.6992	2.30	Q V				
5+50	2.7124	1.92	Q V				
5+55	2.7203	1.15	Q V				
6+ 0	2.7256	0.77	Q V				

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

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Study date 06/20/23 File: 2219P0342410.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
BUILDINGS 3 & 4 - PROPOSED CONDITION
HYDROLOGIC ANALYSIS - 10-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
USER Entry of lag time in hours
Lag time = 0.000 Hr.
Lag time = 0.00 Min.
25% of lag time = 0.00 Min.
40% of lag time = 0.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.00	47.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	5.50	131.40

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 3.440(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 3.440(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	46.0	0.611	0.000	0.611	0.054	0.033
77.0	77.0	0.279	0.000	0.279	0.038	0.011
83.0	83.0	0.210	0.000	0.210	0.014	0.003
32.0	32.0	0.742	0.900	0.141	0.616	0.087
69.0	69.0	0.373	0.900	0.071	0.062	0.004
75.0	75.0	0.303	0.900	0.058	0.216	0.012
					Sum (F) =	0.150

Area averaged mean soil loss (F) (In/Hr) = 0.150
Minimum soil loss rate ((In/Hr)) = 0.075
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	1.#IO	100.000	24.077
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.028	(0.267)	0.007	0.020
2	0.17	0.07	0.028	(0.266)	0.007	0.020
3	0.25	0.07	0.028	(0.265)	0.007	0.020
4	0.33	0.10	0.041	(0.263)	0.011	0.031
5	0.42	0.10	0.041	(0.262)	0.011	0.031
6	0.50	0.10	0.041	(0.261)	0.011	0.031
7	0.58	0.10	0.041	(0.260)	0.011	0.031
8	0.67	0.10	0.041	(0.259)	0.011	0.031
9	0.75	0.10	0.041	(0.258)	0.011	0.031
10	0.83	0.13	0.055	(0.257)	0.014	0.041
11	0.92	0.13	0.055	(0.256)	0.014	0.041
12	1.00	0.13	0.055	(0.255)	0.014	0.041
13	1.08	0.10	0.041	(0.254)	0.011	0.031
14	1.17	0.10	0.041	(0.253)	0.011	0.031
15	1.25	0.10	0.041	(0.252)	0.011	0.031
16	1.33	0.10	0.041	(0.251)	0.011	0.031
17	1.42	0.10	0.041	(0.250)	0.011	0.031
18	1.50	0.10	0.041	(0.249)	0.011	0.031
19	1.58	0.10	0.041	(0.248)	0.011	0.031
20	1.67	0.10	0.041	(0.247)	0.011	0.031
21	1.75	0.10	0.041	(0.246)	0.011	0.031
22	1.83	0.13	0.055	(0.245)	0.014	0.041
23	1.92	0.13	0.055	(0.244)	0.014	0.041
24	2.00	0.13	0.055	(0.243)	0.014	0.041
25	2.08	0.13	0.055	(0.242)	0.014	0.041
26	2.17	0.13	0.055	(0.241)	0.014	0.041
27	2.25	0.13	0.055	(0.240)	0.014	0.041
28	2.33	0.13	0.055	(0.239)	0.014	0.041
29	2.42	0.13	0.055	(0.238)	0.014	0.041
30	2.50	0.13	0.055	(0.237)	0.014	0.041
31	2.58	0.17	0.069	(0.237)	0.018	0.051
32	2.67	0.17	0.069	(0.236)	0.018	0.051
33	2.75	0.17	0.069	(0.235)	0.018	0.051
34	2.83	0.17	0.069	(0.234)	0.018	0.051
35	2.92	0.17	0.069	(0.233)	0.018	0.051
36	3.00	0.17	0.069	(0.232)	0.018	0.051
37	3.08	0.17	0.069	(0.231)	0.018	0.051
38	3.17	0.17	0.069	(0.230)	0.018	0.051
39	3.25	0.17	0.069	(0.229)	0.018	0.051
40	3.33	0.17	0.069	(0.228)	0.018	0.051
41	3.42	0.17	0.069	(0.227)	0.018	0.051
42	3.50	0.17	0.069	(0.226)	0.018	0.051
43	3.58	0.17	0.069	(0.225)	0.018	0.051
44	3.67	0.17	0.069	(0.224)	0.018	0.051
45	3.75	0.17	0.069	(0.223)	0.018	0.051
46	3.83	0.20	0.083	(0.222)	0.021	0.061
47	3.92	0.20	0.083	(0.221)	0.021	0.061
48	4.00	0.20	0.083	(0.220)	0.021	0.061
49	4.08	0.20	0.083	(0.219)	0.021	0.061
50	4.17	0.20	0.083	(0.218)	0.021	0.061
51	4.25	0.20	0.083	(0.218)	0.021	0.061
52	4.33	0.23	0.096	(0.217)	0.025	0.071
53	4.42	0.23	0.096	(0.216)	0.025	0.071
54	4.50	0.23	0.096	(0.215)	0.025	0.071
55	4.58	0.23	0.096	(0.214)	0.025	0.071
56	4.67	0.23	0.096	(0.213)	0.025	0.071
57	4.75	0.23	0.096	(0.212)	0.025	0.071
58	4.83	0.27	0.110	(0.211)	0.029	0.081
59	4.92	0.27	0.110	(0.210)	0.029	0.081
60	5.00	0.27	0.110	(0.209)	0.029	0.081
61	5.08	0.20	0.083	(0.208)	0.021	0.061
62	5.17	0.20	0.083	(0.207)	0.021	0.061
63	5.25	0.20	0.083	(0.207)	0.021	0.061
64	5.33	0.23	0.096	(0.206)	0.025	0.071
65	5.42	0.23	0.096	(0.205)	0.025	0.071
66	5.50	0.23	0.096	(0.204)	0.025	0.071
67	5.58	0.27	0.110	(0.203)	0.029	0.081
68	5.67	0.27	0.110	(0.202)	0.029	0.081
69	5.75	0.27	0.110	(0.201)	0.029	0.081
70	5.83	0.27	0.110	(0.200)	0.029	0.081
71	5.92	0.27	0.110	(0.199)	0.029	0.081
72	6.00	0.27	0.110	(0.198)	0.029	0.081
73	6.08	0.30	0.124	(0.198)	0.032	0.092
74	6.17	0.30	0.124	(0.197)	0.032	0.092
75	6.25	0.30	0.124	(0.196)	0.032	0.092
76	6.33	0.30	0.124	(0.195)	0.032	0.092
77	6.42	0.30	0.124	(0.194)	0.032	0.092
78	6.50	0.30	0.124	(0.193)	0.032	0.092
79	6.58	0.33	0.138	(0.192)	0.036	0.102
80	6.67	0.33	0.138	(0.191)	0.036	0.102
81	6.75	0.33	0.138	(0.191)	0.036	0.102
82	6.83	0.33	0.138	(0.190)	0.036	0.102
83	6.92	0.33	0.138	(0.189)	0.036	0.102
84	7.00	0.33	0.138	(0.188)	0.036	0.102
85	7.08	0.33	0.138	(0.187)	0.036	0.102
86	7.17	0.33	0.138	(0.186)	0.036	0.102
87	7.25	0.33	0.138	(0.186)	0.036	0.102
88	7.33	0.37	0.151	(0.185)	0.039	0.112
89	7.42	0.37	0.151	(0.184)	0.039	0.112

90	7.50	0.37	0.151	(0.183)	0.039	0.112
91	7.58	0.40	0.165	(0.182)	0.043	0.122
92	7.67	0.40	0.165	(0.181)	0.043	0.122
93	7.75	0.40	0.165	(0.180)	0.043	0.122
94	7.83	0.43	0.179	(0.180)	0.047	0.132
95	7.92	0.43	0.179	(0.179)	0.047	0.132
96	8.00	0.43	0.179	(0.178)	0.047	0.132
97	8.08	0.50	0.206	(0.177)	0.054	0.153
98	8.17	0.50	0.206	(0.176)	0.054	0.153
99	8.25	0.50	0.206	(0.175)	0.054	0.153
100	8.33	0.50	0.206	(0.175)	0.054	0.153
101	8.42	0.50	0.206	(0.174)	0.054	0.153
102	8.50	0.50	0.206	(0.173)	0.054	0.153
103	8.58	0.53	0.220	(0.172)	0.057	0.163
104	8.67	0.53	0.220	(0.171)	0.057	0.163
105	8.75	0.53	0.220	(0.171)	0.057	0.163
106	8.83	0.57	0.234	(0.170)	0.061	0.173
107	8.92	0.57	0.234	(0.169)	0.061	0.173
108	9.00	0.57	0.234	(0.168)	0.061	0.173
109	9.08	0.63	0.261	(0.167)	0.068	0.193
110	9.17	0.63	0.261	(0.167)	0.068	0.193
111	9.25	0.63	0.261	(0.166)	0.068	0.193
112	9.33	0.67	0.275	(0.165)	0.072	0.204
113	9.42	0.67	0.275	(0.164)	0.072	0.204
114	9.50	0.67	0.275	(0.163)	0.072	0.204
115	9.58	0.70	0.289	(0.163)	0.075	0.214
116	9.67	0.70	0.289	(0.162)	0.075	0.214
117	9.75	0.70	0.289	(0.161)	0.075	0.214
118	9.83	0.73	0.303	(0.160)	0.079	0.224
119	9.92	0.73	0.303	(0.160)	0.079	0.224
120	10.00	0.73	0.303	(0.159)	0.079	0.224
121	10.08	0.50	0.206	(0.158)	0.054	0.153
122	10.17	0.50	0.206	(0.157)	0.054	0.153
123	10.25	0.50	0.206	(0.156)	0.054	0.153
124	10.33	0.50	0.206	(0.156)	0.054	0.153
125	10.42	0.50	0.206	(0.155)	0.054	0.153
126	10.50	0.50	0.206	(0.154)	0.054	0.153
127	10.58	0.67	0.275	(0.153)	0.072	0.204
128	10.67	0.67	0.275	(0.153)	0.072	0.204
129	10.75	0.67	0.275	(0.152)	0.072	0.204
130	10.83	0.67	0.275	(0.151)	0.072	0.204
131	10.92	0.67	0.275	(0.150)	0.072	0.204
132	11.00	0.67	0.275	(0.150)	0.072	0.204
133	11.08	0.63	0.261	(0.149)	0.068	0.193
134	11.17	0.63	0.261	(0.148)	0.068	0.193
135	11.25	0.63	0.261	(0.148)	0.068	0.193
136	11.33	0.63	0.261	(0.147)	0.068	0.193
137	11.42	0.63	0.261	(0.146)	0.068	0.193
138	11.50	0.63	0.261	(0.145)	0.068	0.193
139	11.58	0.57	0.234	(0.145)	0.061	0.173
140	11.67	0.57	0.234	(0.144)	0.061	0.173
141	11.75	0.57	0.234	(0.143)	0.061	0.173
142	11.83	0.60	0.248	(0.142)	0.064	0.183
143	11.92	0.60	0.248	(0.142)	0.064	0.183
144	12.00	0.60	0.248	(0.141)	0.064	0.183
145	12.08	0.83	0.344	(0.140)	0.089	0.255
146	12.17	0.83	0.344	(0.140)	0.089	0.255
147	12.25	0.83	0.344	(0.139)	0.089	0.255
148	12.33	0.87	0.358	(0.138)	0.093	0.265
149	12.42	0.87	0.358	(0.138)	0.093	0.265
150	12.50	0.87	0.358	(0.137)	0.093	0.265
151	12.58	0.93	0.385	(0.136)	0.100	0.285
152	12.67	0.93	0.385	(0.136)	0.100	0.285
153	12.75	0.93	0.385	(0.135)	0.100	0.285
154	12.83	0.97	0.399	(0.134)	0.104	0.295
155	12.92	0.97	0.399	(0.133)	0.104	0.295
156	13.00	0.97	0.399	(0.133)	0.104	0.295
157	13.08	1.13	0.468	(0.132)	0.122	0.346
158	13.17	1.13	0.468	(0.131)	0.122	0.346
159	13.25	1.13	0.468	(0.131)	0.122	0.346
160	13.33	1.13	0.468	(0.130)	0.122	0.346
161	13.42	1.13	0.468	(0.129)	0.122	0.346
162	13.50	1.13	0.468	(0.129)	0.122	0.346
163	13.58	0.77	0.316	(0.128)	0.082	0.234
164	13.67	0.77	0.316	(0.127)	0.082	0.234
165	13.75	0.77	0.316	(0.127)	0.082	0.234
166	13.83	0.77	0.316	(0.126)	0.082	0.234
167	13.92	0.77	0.316	(0.126)	0.082	0.234
168	14.00	0.77	0.316	(0.125)	0.082	0.234
169	14.08	0.90	0.371	(0.124)	0.097	0.275
170	14.17	0.90	0.371	(0.124)	0.097	0.275
171	14.25	0.90	0.371	(0.123)	0.097	0.275
172	14.33	0.87	0.358	(0.122)	0.093	0.265
173	14.42	0.87	0.358	(0.122)	0.093	0.265
174	14.50	0.87	0.358	(0.121)	0.093	0.265
175	14.58	0.87	0.358	(0.121)	0.093	0.265
176	14.67	0.87	0.358	(0.120)	0.093	0.265
177	14.75	0.87	0.358	(0.119)	0.093	0.265
178	14.83	0.83	0.344	(0.119)	0.089	0.255
179	14.92	0.83	0.344	(0.118)	0.089	0.255
180	15.00	0.83	0.344	(0.117)	0.089	0.255
181	15.08	0.80	0.330	(0.117)	0.086	0.244
182	15.17	0.80	0.330	(0.116)	0.086	0.244
183	15.25	0.80	0.330	(0.116)	0.086	0.244
184	15.33	0.77	0.316	(0.115)	0.082	0.234
185	15.42	0.77	0.316	(0.114)	0.082	0.234
186	15.50	0.77	0.316	(0.114)	0.082	0.234

187	15.58	0.63	0.261	(0.113)	0.068	0.193
188	15.67	0.63	0.261	(0.113)	0.068	0.193
189	15.75	0.63	0.261	(0.112)	0.068	0.193
190	15.83	0.63	0.261	(0.112)	0.068	0.193
191	15.92	0.63	0.261	(0.111)	0.068	0.193
192	16.00	0.63	0.261	(0.110)	0.068	0.193
193	16.08	0.13	0.055	(0.110)	0.014	0.041
194	16.17	0.13	0.055	(0.109)	0.014	0.041
195	16.25	0.13	0.055	(0.109)	0.014	0.041
196	16.33	0.13	0.055	(0.108)	0.014	0.041
197	16.42	0.13	0.055	(0.108)	0.014	0.041
198	16.50	0.13	0.055	(0.107)	0.014	0.041
199	16.58	0.10	0.041	(0.107)	0.011	0.031
200	16.67	0.10	0.041	(0.106)	0.011	0.031
201	16.75	0.10	0.041	(0.105)	0.011	0.031
202	16.83	0.10	0.041	(0.105)	0.011	0.031
203	16.92	0.10	0.041	(0.104)	0.011	0.031
204	17.00	0.10	0.041	(0.104)	0.011	0.031
205	17.08	0.17	0.069	(0.103)	0.018	0.051
206	17.17	0.17	0.069	(0.103)	0.018	0.051
207	17.25	0.17	0.069	(0.102)	0.018	0.051
208	17.33	0.17	0.069	(0.102)	0.018	0.051
209	17.42	0.17	0.069	(0.101)	0.018	0.051
210	17.50	0.17	0.069	(0.101)	0.018	0.051
211	17.58	0.17	0.069	(0.100)	0.018	0.051
212	17.67	0.17	0.069	(0.100)	0.018	0.051
213	17.75	0.17	0.069	(0.099)	0.018	0.051
214	17.83	0.13	0.055	(0.099)	0.014	0.041
215	17.92	0.13	0.055	(0.098)	0.014	0.041
216	18.00	0.13	0.055	(0.098)	0.014	0.041
217	18.08	0.13	0.055	(0.097)	0.014	0.041
218	18.17	0.13	0.055	(0.097)	0.014	0.041
219	18.25	0.13	0.055	(0.096)	0.014	0.041
220	18.33	0.13	0.055	(0.096)	0.014	0.041
221	18.42	0.13	0.055	(0.095)	0.014	0.041
222	18.50	0.13	0.055	(0.095)	0.014	0.041
223	18.58	0.10	0.041	(0.095)	0.011	0.031
224	18.67	0.10	0.041	(0.094)	0.011	0.031
225	18.75	0.10	0.041	(0.094)	0.011	0.031
226	18.83	0.07	0.028	(0.093)	0.007	0.020
227	18.92	0.07	0.028	(0.093)	0.007	0.020
228	19.00	0.07	0.028	(0.092)	0.007	0.020
229	19.08	0.10	0.041	(0.092)	0.011	0.031
230	19.17	0.10	0.041	(0.091)	0.011	0.031
231	19.25	0.10	0.041	(0.091)	0.011	0.031
232	19.33	0.13	0.055	(0.091)	0.014	0.041
233	19.42	0.13	0.055	(0.090)	0.014	0.041
234	19.50	0.13	0.055	(0.090)	0.014	0.041
235	19.58	0.10	0.041	(0.089)	0.011	0.031
236	19.67	0.10	0.041	(0.089)	0.011	0.031
237	19.75	0.10	0.041	(0.088)	0.011	0.031
238	19.83	0.07	0.028	(0.088)	0.007	0.020
239	19.92	0.07	0.028	(0.088)	0.007	0.020
240	20.00	0.07	0.028	(0.087)	0.007	0.020
241	20.08	0.10	0.041	(0.087)	0.011	0.031
242	20.17	0.10	0.041	(0.087)	0.011	0.031
243	20.25	0.10	0.041	(0.086)	0.011	0.031
244	20.33	0.10	0.041	(0.086)	0.011	0.031
245	20.42	0.10	0.041	(0.085)	0.011	0.031
246	20.50	0.10	0.041	(0.085)	0.011	0.031
247	20.58	0.10	0.041	(0.085)	0.011	0.031
248	20.67	0.10	0.041	(0.084)	0.011	0.031
249	20.75	0.10	0.041	(0.084)	0.011	0.031
250	20.83	0.07	0.028	(0.084)	0.007	0.020
251	20.92	0.07	0.028	(0.083)	0.007	0.020
252	21.00	0.07	0.028	(0.083)	0.007	0.020
253	21.08	0.10	0.041	(0.083)	0.011	0.031
254	21.17	0.10	0.041	(0.082)	0.011	0.031
255	21.25	0.10	0.041	(0.082)	0.011	0.031
256	21.33	0.07	0.028	(0.082)	0.007	0.020
257	21.42	0.07	0.028	(0.081)	0.007	0.020
258	21.50	0.07	0.028	(0.081)	0.007	0.020
259	21.58	0.10	0.041	(0.081)	0.011	0.031
260	21.67	0.10	0.041	(0.081)	0.011	0.031
261	21.75	0.10	0.041	(0.080)	0.011	0.031
262	21.83	0.07	0.028	(0.080)	0.007	0.020
263	21.92	0.07	0.028	(0.080)	0.007	0.020
264	22.00	0.07	0.028	(0.079)	0.007	0.020
265	22.08	0.10	0.041	(0.079)	0.011	0.031
266	22.17	0.10	0.041	(0.079)	0.011	0.031
267	22.25	0.10	0.041	(0.079)	0.011	0.031
268	22.33	0.07	0.028	(0.078)	0.007	0.020
269	22.42	0.07	0.028	(0.078)	0.007	0.020
270	22.50	0.07	0.028	(0.078)	0.007	0.020
271	22.58	0.07	0.028	(0.078)	0.007	0.020
272	22.67	0.07	0.028	(0.077)	0.007	0.020
273	22.75	0.07	0.028	(0.077)	0.007	0.020
274	22.83	0.07	0.028	(0.077)	0.007	0.020
275	22.92	0.07	0.028	(0.077)	0.007	0.020
276	23.00	0.07	0.028	(0.077)	0.007	0.020
277	23.08	0.07	0.028	(0.076)	0.007	0.020
278	23.17	0.07	0.028	(0.076)	0.007	0.020
279	23.25	0.07	0.028	(0.076)	0.007	0.020
280	23.33	0.07	0.028	(0.076)	0.007	0.020
281	23.42	0.07	0.028	(0.076)	0.007	0.020
282	23.50	0.07	0.028	(0.076)	0.007	0.020
283	23.58	0.07	0.028	(0.076)	0.007	0.020

284	23.67	0.07	0.028	(0.075)	0.007	0.020	
285	23.75	0.07	0.028	(0.075)	0.007	0.020	
286	23.83	0.07	0.028	(0.075)	0.007	0.020	
287	23.92	0.07	0.028	(0.075)	0.007	0.020	
288	24.00	0.07	0.028	(0.075)	0.007	0.020	

(Loss Rate Not Used)

Sum = 100.0 Sum = 30.5

Flood volume = Effective rainfall 2.55(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 5.1(Ac.Ft)
Total soil loss = 0.89(In)
Total soil loss = 1.780(Ac.Ft)
Total rainfall = 3.44(In)
Flood volume = 220741.3 Cubic Feet
Total soil loss = 77557.8 Cubic Feet

Peak flow rate of this hydrograph = 8.339(CFS)

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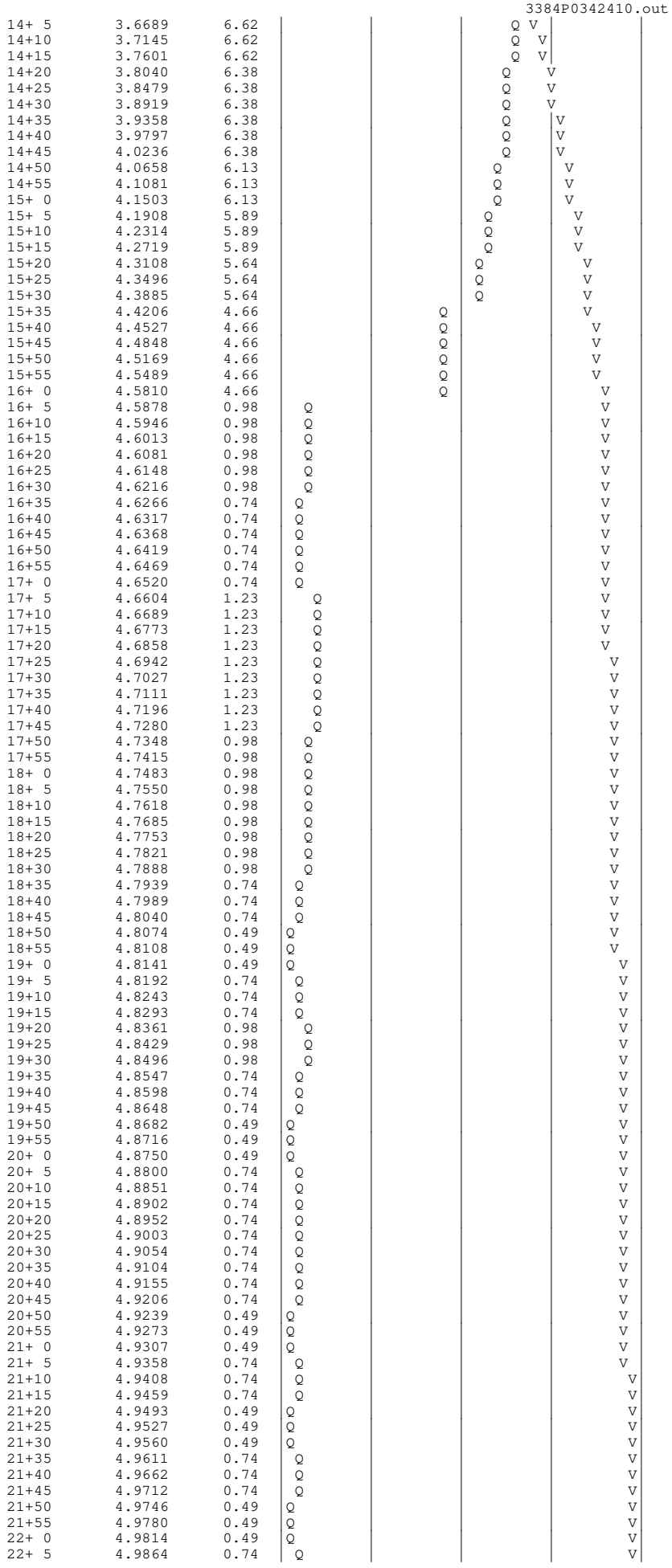
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0034	0.49	VQ				
0+10	0.0068	0.49	VQ				
0+15	0.0101	0.49	VQ				
0+20	0.0152	0.74	V Q				
0+25	0.0203	0.74	V Q				
0+30	0.0253	0.74	V Q				
0+35	0.0304	0.74	V Q				
0+40	0.0355	0.74	V Q				
0+45	0.0405	0.74	V Q				
0+50	0.0473	0.98	V Q				
0+55	0.0541	0.98	V Q				
1+ 0	0.0608	0.98	V Q				
1+ 5	0.0659	0.74	V Q				
1+10	0.0709	0.74	V Q				
1+15	0.0760	0.74	V Q				
1+20	0.0811	0.74	V Q				
1+25	0.0861	0.74	V Q				
1+30	0.0912	0.74	V Q				
1+35	0.0963	0.74	V Q				
1+40	0.1014	0.74	V Q				
1+45	0.1064	0.74	V Q				
1+50	0.1132	0.98	V Q				
1+55	0.1199	0.98	V Q				
2+ 0	0.1267	0.98	V Q				
2+ 5	0.1334	0.98	V Q				
2+10	0.1402	0.98	V Q				
2+15	0.1470	0.98	V Q				
2+20	0.1537	0.98	V Q				
2+25	0.1605	0.98	V Q				
2+30	0.1672	0.98	V Q				
2+35	0.1757	1.23	V Q				
2+40	0.1841	1.23	V Q				
2+45	0.1926	1.23	V Q				
2+50	0.2010	1.23	V Q				
2+55	0.2095	1.23	V Q				
3+ 0	0.2179	1.23	V Q				
3+ 5	0.2263	1.23	V Q				
3+10	0.2348	1.23	V Q				
3+15	0.2432	1.23	V Q				
3+20	0.2517	1.23	V Q				
3+25	0.2601	1.23	V Q				
3+30	0.2686	1.23	V Q				
3+35	0.2770	1.23	V Q				
3+40	0.2855	1.23	V Q				
3+45	0.2939	1.23	V Q				
3+50	0.3041	1.47	V Q				
3+55	0.3142	1.47	V Q				
4+ 0	0.3243	1.47	V Q				
4+ 5	0.3345	1.47	V Q				
4+10	0.3446	1.47	V Q				
4+15	0.3547	1.47	V Q				
4+20	0.3666	1.72	V Q				
4+25	0.3784	1.72	V Q				
4+30	0.3902	1.72	V Q				
4+35	0.4020	1.72	V Q				
4+40	0.4138	1.72	V Q				
4+45	0.4257	1.72	V Q				
4+50	0.4392	1.96	V Q				
4+55	0.4527	1.96	V Q				
5+ 0	0.4662	1.96	V Q				
5+ 5	0.4763	1.47	V Q				
5+10	0.4865	1.47	V Q				
5+15	0.4966	1.47	V Q				
5+20	0.5084	1.72	V Q				
5+25	0.5203	1.72	V Q				
5+30	0.5321	1.72	V Q				
5+35	0.5456	1.96	V Q				
5+40	0.5591	1.96	V Q				
5+45	0.5726	1.96	V Q				
5+50	0.5861	1.96	V Q				
5+55	0.5997	1.96	V Q				

6+ 0	0.6132	1.96	V Q
6+ 5	0.6284	2.21	V Q
6+10	0.6436	2.21	V Q
6+15	0.6588	2.21	V Q
6+20	0.6740	2.21	V Q
6+25	0.6892	2.21	V Q
6+30	0.7044	2.21	V Q
6+35	0.7213	2.45	V Q
6+40	0.7382	2.45	V Q
6+45	0.7551	2.45	V Q
6+50	0.7720	2.45	V Q
6+55	0.7888	2.45	V Q
7+ 0	0.8057	2.45	V Q
7+ 5	0.8226	2.45	V Q
7+10	0.8395	2.45	V Q
7+15	0.8564	2.45	V Q
7+20	0.8750	2.70	V Q
7+25	0.8936	2.70	V Q
7+30	0.9122	2.70	V Q
7+35	0.9324	2.94	V Q
7+40	0.9527	2.94	V Q
7+45	0.9730	2.94	V Q
7+50	0.9949	3.19	V Q
7+55	1.0169	3.19	V Q
8+ 0	1.0388	3.19	V Q
8+ 5	1.0642	3.68	V Q
8+10	1.0895	3.68	V Q
8+15	1.1149	3.68	V Q
8+20	1.1402	3.68	V Q
8+25	1.1655	3.68	V Q
8+30	1.1909	3.68	V Q
8+35	1.2179	3.92	V Q
8+40	1.2449	3.92	V Q
8+45	1.2719	3.92	V Q
8+50	1.3007	4.17	V Q
8+55	1.3294	4.17	V Q
9+ 0	1.3581	4.17	V Q
9+ 5	1.3902	4.66	V Q
9+10	1.4223	4.66	V Q
9+15	1.4544	4.66	V Q
9+20	1.4882	4.91	V Q
9+25	1.5219	4.91	V Q
9+30	1.5557	4.91	V Q
9+35	1.5912	5.15	V Q
9+40	1.6267	5.15	V Q
9+45	1.6621	5.15	V Q
9+50	1.6993	5.40	V Q
9+55	1.7365	5.40	V Q
10+ 0	1.7736	5.40	V Q
10+ 5	1.7990	3.68	Q
10+10	1.8243	3.68	Q
10+15	1.8496	3.68	Q
10+20	1.8750	3.68	Q
10+25	1.9003	3.68	QV
10+30	1.9257	3.68	QV
10+35	1.9594	4.91	V Q
10+40	1.9932	4.91	V Q
10+45	2.0270	4.91	V Q
10+50	2.0608	4.91	V Q
10+55	2.0946	4.91	V Q
11+ 0	2.1284	4.91	V Q
11+ 5	2.1605	4.66	VQ
11+10	2.1925	4.66	VQ
11+15	2.2246	4.66	VQ
11+20	2.2567	4.66	VQ
11+25	2.2888	4.66	Q
11+30	2.3209	4.66	Q
11+35	2.3496	4.17	Q V
11+40	2.3784	4.17	Q V
11+45	2.4071	4.17	Q V
11+50	2.4375	4.41	Q V
11+55	2.4679	4.41	Q V
12+ 0	2.4983	4.41	Q V
12+ 5	2.5405	6.13	V Q
12+10	2.5827	6.13	V Q
12+15	2.6250	6.13	V Q
12+20	2.6689	6.38	V Q
12+25	2.7128	6.38	V Q
12+30	2.7567	6.38	V Q
12+35	2.8040	6.87	V Q
12+40	2.8513	6.87	V Q
12+45	2.8986	6.87	V Q
12+50	2.9476	7.11	V Q
12+55	2.9966	7.11	V Q
13+ 0	3.0456	7.11	V Q
13+ 5	3.1030	8.34	V Q
13+10	3.1604	8.34	V Q
13+15	3.2179	8.34	V Q
13+20	3.2753	8.34	V Q
13+25	3.3327	8.34	V Q
13+30	3.3902	8.34	V Q
13+35	3.4290	5.64	Q V
13+40	3.4679	5.64	Q V
13+45	3.5067	5.64	Q V
13+50	3.5456	5.64	Q V
13+55	3.5844	5.64	Q V
14+ 0	3.6233	5.64	Q V



14+ 5	3.6689	6.62	
14+10	3.7145	6.62	
14+15	3.7601	6.62	
14+20	3.8040	6.38	
14+25	3.8479	6.38	
14+30	3.8919	6.38	
14+35	3.9358	6.38	
14+40	3.9797	6.38	
14+45	4.0236	6.38	
14+50	4.0658	6.13	
14+55	4.1081	6.13	
15+ 0	4.1503	6.13	
15+ 5	4.1908	5.89	
15+10	4.2314	5.89	
15+15	4.2719	5.89	
15+20	4.3108	5.64	
15+25	4.3496	5.64	
15+30	4.3885	5.64	
15+35	4.4206	4.66	
15+40	4.4527	4.66	
15+45	4.4848	4.66	
15+50	4.5169	4.66	
15+55	4.5489	4.66	
16+ 0	4.5810	4.66	
16+ 5	4.5878	0.98	
16+10	4.5946	0.98	
16+15	4.6013	0.98	
16+20	4.6081	0.98	
16+25	4.6148	0.98	
16+30	4.6216	0.98	
16+35	4.6266	0.74	
16+40	4.6317	0.74	
16+45	4.6368	0.74	
16+50	4.6419	0.74	
16+55	4.6469	0.74	
17+ 0	4.6520	0.74	
17+ 5	4.6604	1.23	
17+10	4.6689	1.23	
17+15	4.6773	1.23	
17+20	4.6858	1.23	
17+25	4.6942	1.23	
17+30	4.7027	1.23	
17+35	4.7111	1.23	
17+40	4.7196	1.23	
17+45	4.7280	1.23	
17+50	4.7348	0.98	
17+55	4.7415	0.98	
18+ 0	4.7483	0.98	
18+ 5	4.7550	0.98	
18+10	4.7618	0.98	
18+15	4.7685	0.98	
18+20	4.7753	0.98	
18+25	4.7821	0.98	
18+30	4.7888	0.98	
18+35	4.7939	0.74	
18+40	4.7989	0.74	
18+45	4.8040	0.74	
18+50	4.8074	0.49	
18+55	4.8108	0.49	
19+ 0	4.8141	0.49	
19+ 5	4.8192	0.74	
19+10	4.8243	0.74	
19+15	4.8293	0.74	
19+20	4.8361	0.98	
19+25	4.8429	0.98	
19+30	4.8496	0.98	
19+35	4.8547	0.74	
19+40	4.8598	0.74	
19+45	4.8648	0.74	
19+50	4.8682	0.49	
19+55	4.8716	0.49	
20+ 0	4.8750	0.49	
20+ 5	4.8800	0.74	
20+10	4.8851	0.74	
20+15	4.8902	0.74	
20+20	4.8952	0.74	
20+25	4.9003	0.74	
20+30	4.9054	0.74	
20+35	4.9104	0.74	
20+40	4.9155	0.74	
20+45	4.9206	0.74	
20+50	4.9239	0.49	
20+55	4.9273	0.49	
21+ 0	4.9307	0.49	
21+ 5	4.9358	0.74	
21+10	4.9408	0.74	
21+15	4.9459	0.74	
21+20	4.9493	0.49	
21+25	4.9527	0.49	
21+30	4.9560	0.49	
21+35	4.9611	0.74	
21+40	4.9662	0.74	
21+45	4.9712	0.74	
21+50	4.9746	0.49	
21+55	4.9780	0.49	
22+ 0	4.9814	0.49	
22+ 5	4.9864	0.74	

22+10	4.9915	0.74	Q				V
22+15	4.9966	0.74	Q				V
22+20	5.0000	0.49	Q				V
22+25	5.0033	0.49	Q				V
22+30	5.0067	0.49	Q				V
22+35	5.0101	0.49	Q				V
22+40	5.0135	0.49	Q				V
22+45	5.0168	0.49	Q				V
22+50	5.0202	0.49	Q				V
22+55	5.0236	0.49	Q				V
23+ 0	5.0270	0.49	Q				V
23+ 5	5.0304	0.49	Q				V
23+10	5.0337	0.49	Q				V
23+15	5.0371	0.49	Q				V
23+20	5.0405	0.49	Q				V
23+25	5.0439	0.49	Q				V
23+30	5.0473	0.49	Q				V
23+35	5.0506	0.49	Q				V
23+40	5.0540	0.49	Q				V
23+45	5.0574	0.49	Q				V
23+50	5.0608	0.49	Q				V
23+55	5.0641	0.49	Q				V
24+ 0	5.0675	0.49	Q				V

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

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Study date 06/02/23 File: 3384PBAC1100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 1708.00(Ft.)
Length along longest watercourse measured to centroid = 854.00(Ft.)
Length along longest watercourse = 0.323 Mi.
Length along longest watercourse measured to centroid = 0.162 Mi.
Difference in elevation = 41.50(Ft.)
Slope along watercourse = 128.2904 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.047 Hr.
Lag time = 2.80 Min.
25% of lag time = 0.70 Min.
40% of lag time = 1.12 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.52	20.49

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.15	45.31

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 1.150(In)
Areal adjustment factor = 99.96 %
Adjusted average point rain = 1.150(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	89.2	0.139	0.000	0.139	0.067	0.009
32.0	52.0	0.552	0.900	0.105	0.552	0.058
69.0	84.4	0.194	0.900	0.037	0.379	0.014
75.0	88.0	0.153	0.900	0.029	0.003	0.000
					Sum (F) =	0.081

Area averaged mean soil loss (F) (In/Hr) = 0.081
Minimum soil loss rate ((In/Hr)) = 0.041
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period	Time % of lag	Distribution	Unit Hydrograph

	(hrs)		Graph %		(CFS)
1	0.083	178.639	39.453		15.666
2	0.167	357.277	44.884		17.823
3	0.250	535.916	9.722		3.860
4	0.333	714.555	3.999		1.588
5	0.417	893.193	1.942		0.771
		Sum =	100.000	Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	4.10	0.566	0.081	(	0.130)	0.484
2	0.17	4.60	0.635	0.081	(	0.146)	0.553
3	0.25	4.50	0.621	0.081	(	0.143)	0.540
4	0.33	4.90	0.676	0.081	(	0.155)	0.595
5	0.42	5.50	0.759	0.081	(	0.175)	0.678
6	0.50	6.40	0.883	0.081	(	0.203)	0.802
7	0.58	7.10	0.979	0.081	(	0.225)	0.898
8	0.67	9.00	1.242	0.081	(	0.286)	1.160
9	0.75	12.90	1.780	0.081	(	0.409)	1.698
10	0.83	29.50	4.070	0.081	(	0.936)	3.988
11	0.92	7.00	0.966	0.081	(	0.222)	0.884
12	1.00	4.50	0.621	0.081	(	0.143)	0.540

(Loss Rate Not Used)

Sum = 100.0 Sum = 12.8

Flood volume = Effective rainfall 1.07(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 3.5(Ac.Ft)
Total soil loss = 0.08(In)
Total soil loss = 0.267(Ac.Ft)
Total rainfall = 1.15(In)
Flood volume = 152807.4 Cubic Feet
Total soil loss = 11609.2 Cubic Feet

Peak flow rate of this hydrograph = 99.327(CFS)

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1 - 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	25.0	50.0	75.0	100.0
0+ 5	0.0523	7.59	V Q				
0+10	0.1715	17.31	V Q				
0+15	0.3106	20.20	V Q				
0+20	0.4611	21.85	V Q				
0+25	0.6303	24.56	V Q				
0+30	0.8247	28.23	V Q				
0+35	1.0475	32.35	VQ				
0+40	1.3150	38.84	VQ				
0+45	1.6771	52.58	V Q				
0+50	2.3612	99.33	V				Q
0+55	3.0091	94.08	V Q				
1+ 0	3.3068	43.23	Q	V			
1+ 5	3.4493	20.68	Q				V
1+10	3.4945	6.57	Q				V
1+15	3.5051	1.54	Q				V
1+20	3.5080	0.42	Q				V

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

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Study date 06/02/23 File: 3384PBAC3100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 1708.00(Ft.)
Length along longest watercourse measured to centroid = 854.00(Ft.)
Length along longest watercourse = 0.323 Mi.
Length along longest watercourse measured to centroid = 0.162 Mi.
Difference in elevation = 41.50(Ft.)
Slope along watercourse = 128.2904 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.047 Hr.
Lag time = 2.80 Min.
25% of lag time = 0.70 Min.
40% of lag time = 1.12 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	0.95	37.43

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.90	74.86

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.900(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 1.900(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	89.2	0.139	0.000	0.139	0.067	0.009
32.0	52.0	0.552	0.900	0.105	0.552	0.058
69.0	84.4	0.194	0.900	0.037	0.379	0.014
75.0	88.0	0.153	0.900	0.029	0.003	0.000
					Sum (F) =	0.081

Area averaged mean soil loss (F) (In/Hr) = 0.081
Minimum soil loss rate ((In/Hr)) = 0.041
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

1	0.083	178.639	39.453	15.666
2	0.167	357.277	44.884	17.823
3	0.250	535.916	9.722	3.860
4	0.333	714.555	3.999	1.588
5	0.417	893.193	1.942	0.771
		Sum = 100.000	Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.296	(0.081)	0.068	0.228
2	0.17	1.30	0.296	(0.081)	0.068	0.228
3	0.25	1.10	0.251	(0.081)	0.058	0.193
4	0.33	1.50	0.342	(0.081)	0.079	0.263
5	0.42	1.50	0.342	(0.081)	0.079	0.263
6	0.50	1.80	0.410	0.081	(0.094)	0.329
7	0.58	1.50	0.342	(0.081)	0.079	0.263
8	0.67	1.80	0.410	0.081	(0.094)	0.329
9	0.75	1.80	0.410	0.081	(0.094)	0.329
10	0.83	1.50	0.342	(0.081)	0.079	0.263
11	0.92	1.60	0.365	0.081	(0.084)	0.284
12	1.00	1.80	0.410	0.081	(0.094)	0.329
13	1.08	2.20	0.502	0.081	(0.115)	0.420
14	1.17	2.20	0.502	0.081	(0.115)	0.420
15	1.25	2.20	0.502	0.081	(0.115)	0.420
16	1.33	2.00	0.456	0.081	(0.105)	0.375
17	1.42	2.60	0.593	0.081	(0.136)	0.512
18	1.50	2.70	0.615	0.081	(0.142)	0.534
19	1.58	2.40	0.547	0.081	(0.126)	0.466
20	1.67	2.70	0.615	0.081	(0.142)	0.534
21	1.75	3.30	0.752	0.081	(0.173)	0.671
22	1.83	3.10	0.707	0.081	(0.163)	0.626
23	1.92	2.90	0.661	0.081	(0.152)	0.580
24	2.00	3.00	0.684	0.081	(0.157)	0.603
25	2.08	3.10	0.707	0.081	(0.163)	0.626
26	2.17	4.20	0.957	0.081	(0.220)	0.876
27	2.25	5.00	1.140	0.081	(0.262)	1.059
28	2.33	3.50	0.798	0.081	(0.184)	0.717
29	2.42	6.80	1.550	0.081	(0.357)	1.469
30	2.50	7.30	1.664	0.081	(0.383)	1.583
31	2.58	8.20	1.869	0.081	(0.430)	1.788
32	2.67	5.90	1.345	0.081	(0.309)	1.264
33	2.75	2.00	0.456	0.081	(0.105)	0.375
34	2.83	1.80	0.410	0.081	(0.094)	0.329
35	2.92	1.80	0.410	0.081	(0.094)	0.329
36	3.00	0.60	0.137	(0.081)	0.031	0.105

(Loss Rate Not Used)

Sum = 100.0 Sum = 20.0

Flood volume = Effective rainfall 1.67(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 5.5(Ac.Ft)
Total soil loss = 0.23(In)
Total soil loss = 0.770(Ac.Ft)
Total rainfall = 1.90(In)
Flood volume = 238170.5 Cubic Feet
Total soil loss = 33524.5 Cubic Feet

Peak flow rate of this hydrograph = 63.883(CFS)

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3 - 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 17.5 35.0 52.5 70.0
0+ 5	0.0246	3.58	V Q
0+10	0.0773	7.65	V Q
0+15	0.1322	7.98	V Q
0+20	0.1929	8.81	V Q
0+25	0.2625	10.11	V Q
0+30	0.3407	11.35	V Q
0+35	0.4205	11.58	V Q
0+40	0.5014	11.75	V Q
0+45	0.5893	12.77	V Q
0+50	0.6716	11.94	V Q
0+55	0.7483	11.14	VQ
1+ 0	0.8310	12.01	Q
1+ 5	0.9290	14.23	V Q
1+10	1.0392	16.01	V Q
1+15	1.1525	16.45	VQ
1+20	1.2621	15.91	Q
1+25	1.3814	17.32	QV
1+30	1.5187	19.94	Q
1+35	1.6545	19.73	QV
1+40	1.7912	19.85	Q V
1+45	1.9502	23.09	QV
1+50	2.1223	24.99	QV
1+55	2.2879	24.04	Q V
2+ 0	2.4510	23.68	Q V
2+ 5	2.6184	24.30	Q V
2+10	2.8155	28.62	Q V

2+15	3.0637	36.04	Q V
2+20	3.3044	34.95	Q V
2+25	3.5921	41.77	Q V
2+30	3.9787	56.13	V Q
2+35	4.4186	63.88	V Q
2+40	4.8366	60.69	QV
2+45	5.1050	38.96	Q V
2+50	5.2481	20.78	Q V
2+55	5.3574	15.86	Q V
3+ 0	5.4287	10.36	Q V
3+ 5	5.4560	3.96	Q V
3+10	5.4642	1.18	Q V
3+15	5.4671	0.42	Q V
3+20	5.4676	0.08	Q V

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

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Study date 06/02/23 File: 3384PBAC6100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 1708.00(Ft.)
Length along longest watercourse measured to centroid = 854.00(Ft.)
Length along longest watercourse = 0.323 Mi.
Length along longest watercourse measured to centroid = 0.162 Mi.
Difference in elevation = 41.50(Ft.)
Slope along watercourse = 128.2904 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.047 Hr.
Lag time = 2.80 Min.
25% of lag time = 0.70 Min.
40% of lag time = 1.12 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	1.30	51.22

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.50	98.50

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	89.2	0.139	0.000	0.139	0.067	0.009
32.0	52.0	0.552	0.900	0.105	0.552	0.058
69.0	84.4	0.194	0.900	0.037	0.379	0.014
75.0	88.0	0.153	0.900	0.029	0.003	0.000
					Sum (F) =	0.081

Area averaged mean soil loss (F) (In/Hr) = 0.081
Minimum soil loss rate ((In/Hr)) = 0.041
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

1	0.083	178.639	39.453	15.666
2	0.167	357.277	44.884	17.823
3	0.250	535.916	9.722	3.860
4	0.333	714.555	3.999	1.588
5	0.417	893.193	1.942	0.771
		Sum = 100.000	Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.150	(0.081)	0.034	0.115
2	0.17	0.60	0.180	(0.081)	0.041	0.139
3	0.25	0.60	0.180	(0.081)	0.041	0.139
4	0.33	0.60	0.180	(0.081)	0.041	0.139
5	0.42	0.60	0.180	(0.081)	0.041	0.139
6	0.50	0.70	0.210	(0.081)	0.048	0.162
7	0.58	0.70	0.210	(0.081)	0.048	0.162
8	0.67	0.70	0.210	(0.081)	0.048	0.162
9	0.75	0.70	0.210	(0.081)	0.048	0.162
10	0.83	0.70	0.210	(0.081)	0.048	0.162
11	0.92	0.70	0.210	(0.081)	0.048	0.162
12	1.00	0.80	0.240	(0.081)	0.055	0.185
13	1.08	0.80	0.240	(0.081)	0.055	0.185
14	1.17	0.80	0.240	(0.081)	0.055	0.185
15	1.25	0.80	0.240	(0.081)	0.055	0.185
16	1.33	0.80	0.240	(0.081)	0.055	0.185
17	1.42	0.80	0.240	(0.081)	0.055	0.185
18	1.50	0.80	0.240	(0.081)	0.055	0.185
19	1.58	0.80	0.240	(0.081)	0.055	0.185
20	1.67	0.80	0.240	(0.081)	0.055	0.185
21	1.75	0.80	0.240	(0.081)	0.055	0.185
22	1.83	0.80	0.240	(0.081)	0.055	0.185
23	1.92	0.80	0.240	(0.081)	0.055	0.185
24	2.00	0.90	0.270	(0.081)	0.062	0.208
25	2.08	0.80	0.240	(0.081)	0.055	0.185
26	2.17	0.90	0.270	(0.081)	0.062	0.208
27	2.25	0.90	0.270	(0.081)	0.062	0.208
28	2.33	0.90	0.270	(0.081)	0.062	0.208
29	2.42	0.90	0.270	(0.081)	0.062	0.208
30	2.50	0.90	0.270	(0.081)	0.062	0.208
31	2.58	0.90	0.270	(0.081)	0.062	0.208
32	2.67	0.90	0.270	(0.081)	0.062	0.208
33	2.75	1.00	0.300	(0.081)	0.069	0.231
34	2.83	1.00	0.300	(0.081)	0.069	0.231
35	2.92	1.00	0.300	(0.081)	0.069	0.231
36	3.00	1.00	0.300	(0.081)	0.069	0.231
37	3.08	1.00	0.300	(0.081)	0.069	0.231
38	3.17	1.10	0.330	(0.081)	0.076	0.254
39	3.25	1.10	0.330	(0.081)	0.076	0.254
40	3.33	1.10	0.330	(0.081)	0.076	0.254
41	3.42	1.20	0.360	0.081	(0.083)	0.279
42	3.50	1.30	0.390	0.081	(0.090)	0.309
43	3.58	1.40	0.420	0.081	(0.097)	0.339
44	3.67	1.40	0.420	0.081	(0.097)	0.339
45	3.75	1.50	0.450	0.081	(0.103)	0.369
46	3.83	1.50	0.450	0.081	(0.103)	0.369
47	3.92	1.60	0.480	0.081	(0.110)	0.399
48	4.00	1.60	0.480	0.081	(0.110)	0.399
49	4.08	1.70	0.510	0.081	(0.117)	0.429
50	4.17	1.80	0.540	0.081	(0.124)	0.459
51	4.25	1.90	0.570	0.081	(0.131)	0.489
52	4.33	2.00	0.600	0.081	(0.138)	0.519
53	4.42	2.10	0.630	0.081	(0.145)	0.549
54	4.50	2.10	0.630	0.081	(0.145)	0.549
55	4.58	2.20	0.660	0.081	(0.152)	0.579
56	4.67	2.30	0.690	0.081	(0.159)	0.609
57	4.75	2.40	0.720	0.081	(0.166)	0.639
58	4.83	2.40	0.720	0.081	(0.166)	0.639
59	4.92	2.50	0.750	0.081	(0.172)	0.669
60	5.00	2.60	0.780	0.081	(0.179)	0.699
61	5.08	3.10	0.930	0.081	(0.214)	0.849
62	5.17	3.60	1.080	0.081	(0.248)	0.999
63	5.25	3.90	1.170	0.081	(0.269)	1.089
64	5.33	4.20	1.260	0.081	(0.290)	1.179
65	5.42	4.70	1.410	0.081	(0.324)	1.329
66	5.50	5.60	1.680	0.081	(0.386)	1.599
67	5.58	1.90	0.570	0.081	(0.131)	0.489
68	5.67	0.90	0.270	(0.081)	0.062	0.208
69	5.75	0.60	0.180	(0.081)	0.041	0.139
70	5.83	0.50	0.150	(0.081)	0.034	0.115
71	5.92	0.30	0.090	(0.081)	0.021	0.069
72	6.00	0.20	0.060	(0.081)	0.014	0.046

(Loss Rate Not Used)

Sum = 100.0 Sum = 25.4

Flood volume = Effective rainfall 2.11(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 6.9(Ac.Ft)
Total soil loss = 0.39(In)
Total soil loss = 1.270(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 302195.5 Cubic Feet
Total soil loss = 55311.0 Cubic Feet

Peak flow rate of this hydrograph = 55.801(CFS)

6 - 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	15.0	30.0	45.0	60.0
0+ 5	0.0125	1.81	VQ				
0+10	0.0416	4.23	V Q				
0+15	0.0767	5.09	V Q				
0+20	0.1136	5.36	V Q				
0+25	0.1514	5.49	V Q				
0+30	0.1918	5.87	V Q				
0+35	0.2350	6.28	V Q				
0+40	0.2789	6.37	V Q				
0+45	0.3230	6.41	V Q				
0+50	0.3673	6.42	V Q				
0+55	0.4115	6.42	V Q				
1+ 0	0.4582	6.79	V Q				
1+ 5	0.5078	7.20	V Q				
1+10	0.5580	7.29	VQ				
1+15	0.6084	7.32	VQ				
1+20	0.6590	7.34	VQ				
1+25	0.7095	7.34	Q				
1+30	0.7601	7.34	Q				
1+35	0.8106	7.34	Q				
1+40	0.8612	7.34	Q				
1+45	0.9117	7.34	QV				
1+50	0.9623	7.34	QV				
1+55	1.0129	7.34	QV				
2+ 0	1.0659	7.70	QV				
2+ 5	1.1193	7.75	QV				
2+10	1.1730	7.79	QV				
2+15	1.2291	8.15	Q V				
2+20	1.2857	8.22	Q V				
2+25	1.3425	8.24	Q V				
2+30	1.3994	8.26	Q V				
2+35	1.4562	8.26	Q V				
2+40	1.5131	8.26	Q V				
2+45	1.5725	8.62	Q V				
2+50	1.6347	9.03	Q V				
2+55	1.6975	9.12	Q V				
3+ 0	1.7606	9.16	Q V				
3+ 5	1.8238	9.18	Q V				
3+10	1.8895	9.54	Q V				
3+15	1.9580	9.95	Q V				
3+20	2.0271	10.04	Q V				
3+25	2.0992	10.46	Q V				
3+30	2.1776	11.39	Q V				
3+35	2.2637	12.49	Q V				
3+40	2.3545	13.18	Q V				
3+45	2.4497	13.84	Q V				
3+50	2.5492	14.44	Q V				
3+55	2.6528	15.05	Q V				
4+ 0	2.7605	15.63	Q V				
4+ 5	2.8724	16.24	Q V				
4+10	2.9915	17.29	Q V				
4+15	3.1185	18.44	Q V				
4+20	3.2535	19.61	Q V				
4+25	3.3967	20.80	Q V				
4+30	3.5449	21.52	Q V				
4+35	3.6977	22.18	Q V				
4+40	3.8578	23.25	Q V				
4+45	4.0258	24.40	Q V				
4+50	4.1987	25.10	Q V				
4+55	4.3760	25.75	Q V				
5+ 0	4.5608	26.83	Q V				
5+ 5	4.7664	29.85	Q V				
5+10	5.0077	35.04	Q V				
5+15	5.2817	39.78	Q V				
5+20	5.5822	43.63	Q V				
5+25	5.9147	48.29	Q V				
5+30	6.2990	55.80	VQ				
5+35	6.6021	44.01	Q V				
5+40	6.7479	21.17	Q V				
5+45	6.8260	11.33	Q V				
5+50	6.8748	7.09	Q V				
5+55	6.9050	4.39	Q V				
6+ 0	6.9242	2.79	Q V				
6+ 5	6.9337	1.38	Q V				
6+10	6.9363	0.38	Q V				
6+15	6.9372	0.13	Q V				
6+20	6.9375	0.04	Q V				

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

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Study date 06/02/23 File: 3384PBAC24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 39.40(Ac.) = 0.062 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 39.40(Ac.) = 0.062 Sq. Mi.
Length along longest watercourse = 1708.00(Ft.)
Length along longest watercourse measured to centroid = 854.00(Ft.)
Length along longest watercourse = 0.323 Mi.
Length along longest watercourse measured to centroid = 0.162 Mi.
Difference in elevation = 41.50(Ft.)
Slope along watercourse = 128.2904 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.047 Hr.
Lag time = 2.80 Min.
25% of lag time = 0.70 Min.
40% of lag time = 1.12 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	2.00	78.80

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
39.40	5.50	216.70

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 5.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 5.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
2.640	77.00	0.000
21.740	32.00	0.900
14.920	69.00	0.900
0.100	75.00	0.900

Total Area Entered = 39.40(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	89.2	0.139	0.000	0.139	0.067	0.009
32.0	52.0	0.552	0.900	0.105	0.552	0.058
69.0	84.4	0.194	0.900	0.037	0.379	0.014
75.0	88.0	0.153	0.900	0.029	0.003	0.000
					Sum (F) =	0.081

Area averaged mean soil loss (F) (In/Hr) = 0.081
Minimum soil loss rate ((In/Hr)) = 0.041
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.230

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

1	0.083	178.639	39.453		15.666
2	0.167	357.277	44.884		17.823
3	0.250	535.916	9.722		3.860
4	0.333	714.555	3.999		1.588
5	0.417	893.193	1.942		0.771
			Sum = 100.000	Sum=	39.708

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.044	(0.144)	0.010	0.034
2	0.17	0.07	0.044	(0.143)	0.010	0.034
3	0.25	0.07	0.044	(0.143)	0.010	0.034
4	0.33	0.10	0.066	(0.142)	0.015	0.051
5	0.42	0.10	0.066	(0.142)	0.015	0.051
6	0.50	0.10	0.066	(0.141)	0.015	0.051
7	0.58	0.10	0.066	(0.141)	0.015	0.051
8	0.67	0.10	0.066	(0.140)	0.015	0.051
9	0.75	0.10	0.066	(0.139)	0.015	0.051
10	0.83	0.13	0.088	(0.139)	0.020	0.068
11	0.92	0.13	0.088	(0.138)	0.020	0.068
12	1.00	0.13	0.088	(0.138)	0.020	0.068
13	1.08	0.10	0.066	(0.137)	0.015	0.051
14	1.17	0.10	0.066	(0.137)	0.015	0.051
15	1.25	0.10	0.066	(0.136)	0.015	0.051
16	1.33	0.10	0.066	(0.136)	0.015	0.051
17	1.42	0.10	0.066	(0.135)	0.015	0.051
18	1.50	0.10	0.066	(0.135)	0.015	0.051
19	1.58	0.10	0.066	(0.134)	0.015	0.051
20	1.67	0.10	0.066	(0.134)	0.015	0.051
21	1.75	0.10	0.066	(0.133)	0.015	0.051
22	1.83	0.13	0.088	(0.132)	0.020	0.068
23	1.92	0.13	0.088	(0.132)	0.020	0.068
24	2.00	0.13	0.088	(0.131)	0.020	0.068
25	2.08	0.13	0.088	(0.131)	0.020	0.068
26	2.17	0.13	0.088	(0.130)	0.020	0.068
27	2.25	0.13	0.088	(0.130)	0.020	0.068
28	2.33	0.13	0.088	(0.129)	0.020	0.068
29	2.42	0.13	0.088	(0.129)	0.020	0.068
30	2.50	0.13	0.088	(0.128)	0.020	0.068
31	2.58	0.17	0.110	(0.128)	0.025	0.085
32	2.67	0.17	0.110	(0.127)	0.025	0.085
33	2.75	0.17	0.110	(0.127)	0.025	0.085
34	2.83	0.17	0.110	(0.126)	0.025	0.085
35	2.92	0.17	0.110	(0.126)	0.025	0.085
36	3.00	0.17	0.110	(0.125)	0.025	0.085
37	3.08	0.17	0.110	(0.125)	0.025	0.085
38	3.17	0.17	0.110	(0.124)	0.025	0.085
39	3.25	0.17	0.110	(0.124)	0.025	0.085
40	3.33	0.17	0.110	(0.123)	0.025	0.085
41	3.42	0.17	0.110	(0.122)	0.025	0.085
42	3.50	0.17	0.110	(0.122)	0.025	0.085
43	3.58	0.17	0.110	(0.121)	0.025	0.085
44	3.67	0.17	0.110	(0.121)	0.025	0.085
45	3.75	0.17	0.110	(0.120)	0.025	0.085
46	3.83	0.20	0.132	(0.120)	0.030	0.102
47	3.92	0.20	0.132	(0.119)	0.030	0.102
48	4.00	0.20	0.132	(0.119)	0.030	0.102
49	4.08	0.20	0.132	(0.118)	0.030	0.102
50	4.17	0.20	0.132	(0.118)	0.030	0.102
51	4.25	0.20	0.132	(0.117)	0.030	0.102
52	4.33	0.23	0.154	(0.117)	0.035	0.119
53	4.42	0.23	0.154	(0.116)	0.035	0.119
54	4.50	0.23	0.154	(0.116)	0.035	0.119
55	4.58	0.23	0.154	(0.115)	0.035	0.119
56	4.67	0.23	0.154	(0.115)	0.035	0.119
57	4.75	0.23	0.154	(0.114)	0.035	0.119
58	4.83	0.27	0.176	(0.114)	0.040	0.136
59	4.92	0.27	0.176	(0.113)	0.040	0.136
60	5.00	0.27	0.176	(0.113)	0.040	0.136
61	5.08	0.20	0.132	(0.112)	0.030	0.102
62	5.17	0.20	0.132	(0.112)	0.030	0.102
63	5.25	0.20	0.132	(0.111)	0.030	0.102
64	5.33	0.23	0.154	(0.111)	0.035	0.119
65	5.42	0.23	0.154	(0.111)	0.035	0.119
66	5.50	0.23	0.154	(0.110)	0.035	0.119
67	5.58	0.27	0.176	(0.110)	0.040	0.136
68	5.67	0.27	0.176	(0.109)	0.040	0.136
69	5.75	0.27	0.176	(0.109)	0.040	0.136
70	5.83	0.27	0.176	(0.108)	0.040	0.136
71	5.92	0.27	0.176	(0.108)	0.040	0.136
72	6.00	0.27	0.176	(0.107)	0.040	0.136
73	6.08	0.30	0.198	(0.107)	0.046	0.152
74	6.17	0.30	0.198	(0.106)	0.046	0.152
75	6.25	0.30	0.198	(0.106)	0.046	0.152
76	6.33	0.30	0.198	(0.105)	0.046	0.152
77	6.42	0.30	0.198	(0.105)	0.046	0.152
78	6.50	0.30	0.198	(0.104)	0.046	0.152
79	6.58	0.33	0.220	(0.104)	0.051	0.169
80	6.67	0.33	0.220	(0.103)	0.051	0.169
81	6.75	0.33	0.220	(0.103)	0.051	0.169
82	6.83	0.33	0.220	(0.102)	0.051	0.169
83	6.92	0.33	0.220	(0.102)	0.051	0.169

84	7.00	0.33	0.220	(	0.102)	0.051		0.169
85	7.08	0.33	0.220	(	0.101)	0.051		0.169
86	7.17	0.33	0.220	(	0.101)	0.051		0.169
87	7.25	0.33	0.220	(	0.100)	0.051		0.169
88	7.33	0.37	0.242	(	0.100)	0.056		0.186
89	7.42	0.37	0.242	(	0.099)	0.056		0.186
90	7.50	0.37	0.242	(	0.099)	0.056		0.186
91	7.58	0.40	0.264	(	0.098)	0.061		0.203
92	7.67	0.40	0.264	(	0.098)	0.061		0.203
93	7.75	0.40	0.264	(	0.097)	0.061		0.203
94	7.83	0.43	0.286	(	0.097)	0.066		0.220
95	7.92	0.43	0.286	(	0.097)	0.066		0.220
96	8.00	0.43	0.286	(	0.096)	0.066		0.220
97	8.08	0.50	0.330	(	0.096)	0.076		0.254
98	8.17	0.50	0.330	(	0.095)	0.076		0.254
99	8.25	0.50	0.330	(	0.095)	0.076		0.254
100	8.33	0.50	0.330	(	0.094)	0.076		0.254
101	8.42	0.50	0.330	(	0.094)	0.076		0.254
102	8.50	0.50	0.330	(	0.093)	0.076		0.254
103	8.58	0.53	0.352	(	0.093)	0.081		0.271
104	8.67	0.53	0.352	(	0.093)	0.081		0.271
105	8.75	0.53	0.352	(	0.092)	0.081		0.271
106	8.83	0.57	0.374	(	0.092)	0.086		0.288
107	8.92	0.57	0.374	(	0.091)	0.086		0.288
108	9.00	0.57	0.374	(	0.091)	0.086		0.288
109	9.08	0.63	0.418		0.090	(	0.096)	0.328
110	9.17	0.63	0.418		0.090	(	0.096)	0.328
111	9.25	0.63	0.418		0.090	(	0.096)	0.328
112	9.33	0.67	0.440		0.089	(	0.101)	0.351
113	9.42	0.67	0.440		0.089	(	0.101)	0.351
114	9.50	0.67	0.440		0.088	(	0.101)	0.352
115	9.58	0.70	0.462		0.088	(	0.106)	0.374
116	9.67	0.70	0.462		0.087	(	0.106)	0.375
117	9.75	0.70	0.462		0.087	(	0.106)	0.375
118	9.83	0.73	0.484		0.087	(	0.111)	0.397
119	9.92	0.73	0.484		0.086	(	0.111)	0.398
120	10.00	0.73	0.484		0.086	(	0.111)	0.398
121	10.08	0.50	0.330	(	0.085)	0.076		0.254
122	10.17	0.50	0.330	(	0.085)	0.076		0.254
123	10.25	0.50	0.330	(	0.084)	0.076		0.254
124	10.33	0.50	0.330	(	0.084)	0.076		0.254
125	10.42	0.50	0.330	(	0.084)	0.076		0.254
126	10.50	0.50	0.330	(	0.083)	0.076		0.254
127	10.58	0.67	0.440		0.083	(	0.101)	0.357
128	10.67	0.67	0.440		0.082	(	0.101)	0.358
129	10.75	0.67	0.440		0.082	(	0.101)	0.358
130	10.83	0.67	0.440		0.082	(	0.101)	0.358
131	10.92	0.67	0.440		0.081	(	0.101)	0.359
132	11.00	0.67	0.440		0.081	(	0.101)	0.359
133	11.08	0.63	0.418		0.080	(	0.096)	0.338
134	11.17	0.63	0.418		0.080	(	0.096)	0.338
135	11.25	0.63	0.418		0.080	(	0.096)	0.338
136	11.33	0.63	0.418		0.079	(	0.096)	0.339
137	11.42	0.63	0.418		0.079	(	0.096)	0.339
138	11.50	0.63	0.418		0.078	(	0.096)	0.340
139	11.58	0.57	0.374		0.078	(	0.086)	0.296
140	11.67	0.57	0.374		0.078	(	0.086)	0.296
141	11.75	0.57	0.374		0.077	(	0.086)	0.297
142	11.83	0.60	0.396		0.077	(	0.091)	0.319
143	11.92	0.60	0.396		0.077	(	0.091)	0.319
144	12.00	0.60	0.396		0.076	(	0.091)	0.320
145	12.08	0.83	0.550		0.076	(	0.126)	0.474
146	12.17	0.83	0.550		0.075	(	0.126)	0.475
147	12.25	0.83	0.550		0.075	(	0.126)	0.475
148	12.33	0.87	0.572		0.075	(	0.132)	0.497
149	12.42	0.87	0.572		0.074	(	0.132)	0.498
150	12.50	0.87	0.572		0.074	(	0.132)	0.498
151	12.58	0.93	0.616		0.074	(	0.142)	0.542
152	12.67	0.93	0.616		0.073	(	0.142)	0.543
153	12.75	0.93	0.616		0.073	(	0.142)	0.543
154	12.83	0.97	0.638		0.072	(	0.147)	0.566
155	12.92	0.97	0.638		0.072	(	0.147)	0.566
156	13.00	0.97	0.638		0.072	(	0.147)	0.566
157	13.08	1.13	0.748		0.071	(	0.172)	0.677
158	13.17	1.13	0.748		0.071	(	0.172)	0.677
159	13.25	1.13	0.748		0.071	(	0.172)	0.677
160	13.33	1.13	0.748		0.070	(	0.172)	0.678
161	13.42	1.13	0.748		0.070	(	0.172)	0.678
162	13.50	1.13	0.748		0.070	(	0.172)	0.678
163	13.58	0.77	0.506		0.069	(	0.116)	0.437
164	13.67	0.77	0.506		0.069	(	0.116)	0.437
165	13.75	0.77	0.506		0.068	(	0.116)	0.437
166	13.83	0.77	0.506		0.068	(	0.116)	0.438
167	13.92	0.77	0.506		0.068	(	0.116)	0.438
168	14.00	0.77	0.506		0.067	(	0.116)	0.439
169	14.08	0.90	0.594		0.067	(	0.137)	0.527
170	14.17	0.90	0.594		0.067	(	0.137)	0.527
171	14.25	0.90	0.594		0.066	(	0.137)	0.528
172	14.33	0.87	0.572		0.066	(	0.132)	0.506
173	14.42	0.87	0.572		0.066	(	0.132)	0.506
174	14.50	0.87	0.572		0.065	(	0.132)	0.507
175	14.58	0.87	0.572		0.065	(	0.132)	0.507
176	14.67	0.87	0.572		0.065	(	0.132)	0.507
177	14.75	0.87	0.572		0.064	(	0.132)	0.508
178	14.83	0.83	0.550		0.064	(	0.126)	0.486
179	14.92	0.83	0.550		0.064	(	0.126)	0.486
180	15.00	0.83	0.550		0.063	(	0.126)	0.487

181	15.08	0.80	0.528	0.063	(0.121)	0.465
182	15.17	0.80	0.528	0.063	(0.121)	0.465
183	15.25	0.80	0.528	0.062	(0.121)	0.466
184	15.33	0.77	0.506	0.062	(0.116)	0.444
185	15.42	0.77	0.506	0.062	(0.116)	0.444
186	15.50	0.77	0.506	0.061	(0.116)	0.444
187	15.58	0.63	0.418	0.061	(0.096)	0.357
188	15.67	0.63	0.418	0.061	(0.096)	0.357
189	15.75	0.63	0.418	0.061	(0.096)	0.357
190	15.83	0.63	0.418	0.060	(0.096)	0.358
191	15.92	0.63	0.418	0.060	(0.096)	0.358
192	16.00	0.63	0.418	0.060	(0.096)	0.358
193	16.08	0.13	0.088	(0.059)	0.020	0.068
194	16.17	0.13	0.088	(0.059)	0.020	0.068
195	16.25	0.13	0.088	(0.059)	0.020	0.068
196	16.33	0.13	0.088	(0.058)	0.020	0.068
197	16.42	0.13	0.088	(0.058)	0.020	0.068
198	16.50	0.13	0.088	(0.058)	0.020	0.068
199	16.58	0.10	0.066	(0.058)	0.015	0.051
200	16.67	0.10	0.066	(0.057)	0.015	0.051
201	16.75	0.10	0.066	(0.057)	0.015	0.051
202	16.83	0.10	0.066	(0.057)	0.015	0.051
203	16.92	0.10	0.066	(0.056)	0.015	0.051
204	17.00	0.10	0.066	(0.056)	0.015	0.051
205	17.08	0.17	0.110	(0.056)	0.025	0.085
206	17.17	0.17	0.110	(0.056)	0.025	0.085
207	17.25	0.17	0.110	(0.055)	0.025	0.085
208	17.33	0.17	0.110	(0.055)	0.025	0.085
209	17.42	0.17	0.110	(0.055)	0.025	0.085
210	17.50	0.17	0.110	(0.054)	0.025	0.085
211	17.58	0.17	0.110	(0.054)	0.025	0.085
212	17.67	0.17	0.110	(0.054)	0.025	0.085
213	17.75	0.17	0.110	(0.054)	0.025	0.085
214	17.83	0.13	0.088	(0.053)	0.020	0.068
215	17.92	0.13	0.088	(0.053)	0.020	0.068
216	18.00	0.13	0.088	(0.053)	0.020	0.068
217	18.08	0.13	0.088	(0.053)	0.020	0.068
218	18.17	0.13	0.088	(0.052)	0.020	0.068
219	18.25	0.13	0.088	(0.052)	0.020	0.068
220	18.33	0.13	0.088	(0.052)	0.020	0.068
221	18.42	0.13	0.088	(0.052)	0.020	0.068
222	18.50	0.13	0.088	(0.051)	0.020	0.068
223	18.58	0.10	0.066	(0.051)	0.015	0.051
224	18.67	0.10	0.066	(0.051)	0.015	0.051
225	18.75	0.10	0.066	(0.051)	0.015	0.051
226	18.83	0.07	0.044	(0.050)	0.010	0.034
227	18.92	0.07	0.044	(0.050)	0.010	0.034
228	19.00	0.07	0.044	(0.050)	0.010	0.034
229	19.08	0.10	0.066	(0.050)	0.015	0.051
230	19.17	0.10	0.066	(0.049)	0.015	0.051
231	19.25	0.10	0.066	(0.049)	0.015	0.051
232	19.33	0.13	0.088	(0.049)	0.020	0.068
233	19.42	0.13	0.088	(0.049)	0.020	0.068
234	19.50	0.13	0.088	(0.048)	0.020	0.068
235	19.58	0.10	0.066	(0.048)	0.015	0.051
236	19.67	0.10	0.066	(0.048)	0.015	0.051
237	19.75	0.10	0.066	(0.048)	0.015	0.051
238	19.83	0.07	0.044	(0.048)	0.010	0.034
239	19.92	0.07	0.044	(0.047)	0.010	0.034
240	20.00	0.07	0.044	(0.047)	0.010	0.034
241	20.08	0.10	0.066	(0.047)	0.015	0.051
242	20.17	0.10	0.066	(0.047)	0.015	0.051
243	20.25	0.10	0.066	(0.047)	0.015	0.051
244	20.33	0.10	0.066	(0.046)	0.015	0.051
245	20.42	0.10	0.066	(0.046)	0.015	0.051
246	20.50	0.10	0.066	(0.046)	0.015	0.051
247	20.58	0.10	0.066	(0.046)	0.015	0.051
248	20.67	0.10	0.066	(0.046)	0.015	0.051
249	20.75	0.10	0.066	(0.045)	0.015	0.051
250	20.83	0.07	0.044	(0.045)	0.010	0.034
251	20.92	0.07	0.044	(0.045)	0.010	0.034
252	21.00	0.07	0.044	(0.045)	0.010	0.034
253	21.08	0.10	0.066	(0.045)	0.015	0.051
254	21.17	0.10	0.066	(0.044)	0.015	0.051
255	21.25	0.10	0.066	(0.044)	0.015	0.051
256	21.33	0.07	0.044	(0.044)	0.010	0.034
257	21.42	0.07	0.044	(0.044)	0.010	0.034
258	21.50	0.07	0.044	(0.044)	0.010	0.034
259	21.58	0.10	0.066	(0.044)	0.015	0.051
260	21.67	0.10	0.066	(0.043)	0.015	0.051
261	21.75	0.10	0.066	(0.043)	0.015	0.051
262	21.83	0.07	0.044	(0.043)	0.010	0.034
263	21.92	0.07	0.044	(0.043)	0.010	0.034
264	22.00	0.07	0.044	(0.043)	0.010	0.034
265	22.08	0.10	0.066	(0.043)	0.015	0.051
266	22.17	0.10	0.066	(0.043)	0.015	0.051
267	22.25	0.10	0.066	(0.042)	0.015	0.051
268	22.33	0.07	0.044	(0.042)	0.010	0.034
269	22.42	0.07	0.044	(0.042)	0.010	0.034
270	22.50	0.07	0.044	(0.042)	0.010	0.034
271	22.58	0.07	0.044	(0.042)	0.010	0.034
272	22.67	0.07	0.044	(0.042)	0.010	0.034
273	22.75	0.07	0.044	(0.042)	0.010	0.034
274	22.83	0.07	0.044	(0.042)	0.010	0.034
275	22.92	0.07	0.044	(0.041)	0.010	0.034
276	23.00	0.07	0.044	(0.041)	0.010	0.034
277	23.08	0.07	0.044	(0.041)	0.010	0.034

278	23.17	0.07	0.044	(0.041)	0.010	0.034
279	23.25	0.07	0.044	(0.041)	0.010	0.034
280	23.33	0.07	0.044	(0.041)	0.010	0.034
281	23.42	0.07	0.044	(0.041)	0.010	0.034
282	23.50	0.07	0.044	(0.041)	0.010	0.034
283	23.58	0.07	0.044	(0.041)	0.010	0.034
284	23.67	0.07	0.044	(0.041)	0.010	0.034
285	23.75	0.07	0.044	(0.041)	0.010	0.034
286	23.83	0.07	0.044	(0.041)	0.010	0.034
287	23.92	0.07	0.044	(0.041)	0.010	0.034
288	24.00	0.07	0.044	(0.041)	0.010	0.034

(Loss Rate Not Used)

Sum = 100.0 Sum = 54.3

Flood volume = Effective rainfall 4.52(In)
times area 39.4(Ac.)/[(In)/(Ft.)] = 14.9(Ac.Ft)
Total soil loss = 0.98(In)
Total soil loss = 3.202(Ac.Ft)
Total rainfall = 5.50(In)
Flood volume = 647083.5 Cubic Feet
Total soil loss = 139476.9 Cubic Feet

Peak flow rate of this hydrograph = 26.941(CFS)

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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	7.5	15.0	22.5	30.0
0+ 5	0.0037	0.53	Q				
0+10	0.0115	1.14	VQ				
0+15	0.0202	1.27	VQ				
0+20	0.0311	1.59	V Q				
0+25	0.0443	1.91	V Q				
0+30	0.0579	1.98	V Q				
0+35	0.0717	2.01	V Q				
0+40	0.0856	2.02	V Q				
0+45	0.0995	2.02	V Q				
0+50	0.1153	2.28	V Q				
0+55	0.1331	2.59	V Q				
1+ 0	0.1513	2.65	V Q				
1+ 5	0.1680	2.41	V Q				
1+10	0.1826	2.12	V Q				
1+15	0.1968	2.06	V Q				
1+20	0.2108	2.03	V Q				
1+25	0.2247	2.02	V Q				
1+30	0.2386	2.02	V Q				
1+35	0.2525	2.02	V Q				
1+40	0.2664	2.02	V Q				
1+45	0.2803	2.02	V Q				
1+50	0.2960	2.28	V Q				
1+55	0.3138	2.59	V Q				
2+ 0	0.3321	2.65	V Q				
2+ 5	0.3505	2.68	V Q				
2+10	0.3691	2.69	V Q				
2+15	0.3876	2.69	V Q				
2+20	0.4062	2.69	V Q				
2+25	0.4247	2.69	V Q				
2+30	0.4432	2.69	V Q				
2+35	0.4636	2.96	V Q				
2+40	0.4861	3.26	V Q				
2+45	0.5089	3.32	V Q				
2+50	0.5320	3.35	V Q				
2+55	0.5552	3.36	V Q				
3+ 0	0.5784	3.36	V Q				
3+ 5	0.6016	3.36	V Q				
3+10	0.6247	3.36	V Q				
3+15	0.6479	3.36	V Q				
3+20	0.6711	3.36	V Q				
3+25	0.6942	3.36	V Q				
3+30	0.7174	3.36	V Q				
3+35	0.7406	3.36	V Q				
3+40	0.7638	3.36	V Q				
3+45	0.7869	3.36	V Q				
3+50	0.8119	3.63	V Q				
3+55	0.8390	3.93	V Q				
4+ 0	0.8666	4.00	V Q				
4+ 5	0.8943	4.02	V Q				
4+10	0.9221	4.04	V Q				
4+15	0.9499	4.04	V Q				
4+20	0.9795	4.30	V Q				
4+25	1.0112	4.61	V Q				
4+30	1.0434	4.67	V Q				
4+35	1.0758	4.70	V Q				
4+40	1.1082	4.71	V Q				
4+45	1.1406	4.71	V Q				
4+50	1.1749	4.98	V Q				
4+55	1.2113	5.28	V Q				
5+ 0	1.2481	5.34	V Q				
5+ 5	1.2814	4.84	V Q				
5+10	1.3107	4.25	V Q				
5+15	1.3390	4.12	V Q				
5+20	1.3688	4.33	V Q				
5+25	1.4005	4.61	V Q				

5+30	1.4327	4.67	V Q
5+35	1.4669	4.96	V Q
5+40	1.5032	5.28	V Q
5+45	1.5400	5.34	V Q
5+50	1.5770	5.37	V Q
5+55	1.6141	5.38	V Q
6+ 0	1.6512	5.38	V Q
6+ 5	1.6901	5.65	V Q
6+10	1.7311	5.95	V Q
6+15	1.7725	6.02	V Q
6+20	1.8141	6.04	V Q
6+25	1.8558	6.06	V Q
6+30	1.8976	6.06	V Q
6+35	1.9411	6.32	V Q
6+40	1.9867	6.62	V Q
6+45	2.0328	6.69	V Q
6+50	2.0790	6.72	V Q
6+55	2.1254	6.73	V Q
7+ 0	2.1717	6.73	V Q
7+ 5	2.2181	6.73	V Q
7+10	2.2644	6.73	V Q
7+15	2.3108	6.73	V Q
7+20	2.3590	6.99	V Q
7+25	2.4092	7.30	V Q
7+30	2.4599	7.36	V Q
7+35	2.5126	7.65	V Q
7+40	2.5675	7.97	V Q
7+45	2.6229	8.04	V Q
7+50	2.6802	8.33	V Q
7+55	2.7397	8.64	V Q
8+ 0	2.7997	8.71	V Q
8+ 5	2.8635	9.27	V Q
8+10	2.9316	9.88	V Q
8+15	3.0006	10.01	V Q
8+20	3.0699	10.07	V Q
8+25	3.1394	10.09	V Q
8+30	3.2089	10.09	V Q
8+35	3.2803	10.36	V Q
8+40	3.3537	10.66	V Q
8+45	3.4276	10.73	V Q
8+50	3.5035	11.02	V Q
8+55	3.5816	11.33	V Q
9+ 0	3.6601	11.40	V Q
9+ 5	3.7430	12.05	V Q
9+10	3.8310	12.78	V Q
9+15	3.9202	12.94	V Q
9+20	4.0122	13.37	V Q
9+25	4.1073	13.81	V Q
9+30	4.2031	13.91	V Q
9+35	4.3016	14.30	V Q
9+40	4.4030	14.73	V Q
9+45	4.5052	14.83	V Q
9+50	4.6101	15.23	V Q
9+55	4.7179	15.65	V Q
10+ 0	4.8264	15.76	V Q
10+ 5	4.9197	13.54	V Q
10+10	4.9953	10.99	VQ
10+15	5.0672	10.43	Q
10+20	5.1375	10.21	Q
10+25	5.2070	10.09	QV
10+30	5.2765	10.09	QV
10+35	5.3572	11.71	VQ
10+40	5.4505	13.55	V Q
10+45	5.5467	13.96	V Q
10+50	5.6441	14.14	V Q
10+55	5.7422	14.24	V Q
11+ 0	5.8403	14.25	V Q
11+ 5	5.9362	13.93	V Q
11+10	6.0295	13.55	V Q
11+15	6.1224	13.48	VQ
11+20	6.2151	13.46	VQ
11+25	6.3078	13.46	VQ
11+30	6.4006	13.47	Q
11+35	6.4887	12.80	Q
11+40	6.5716	12.03	QV
11+45	6.6534	11.88	Q V
11+50	6.7372	12.17	Q V
11+55	6.8236	12.54	Q V
12+ 0	6.9106	12.64	Q V
12+ 5	7.0147	15.10	V Q
12+10	7.1378	17.88	V Q
12+15	7.2652	18.49	V Q
12+20	7.3967	19.10	V Q
12+25	7.5318	19.62	V Q
12+30	7.6677	19.72	V Q
12+35	7.8086	20.46	V Q
12+40	7.9551	21.28	V Q
12+45	8.1030	21.46	V Q
12+50	8.2537	21.89	V Q
12+55	8.4076	22.33	V Q
13+ 0	8.5620	22.43	V Q
13+ 5	8.7288	24.21	V Q
13+10	8.9092	26.20	V Q
13+15	9.0927	26.64	V Q
13+20	9.2774	26.83	V Q
13+25	9.4629	26.93	V Q
13+30	9.6484	26.94	V Q

13+35	9.8079	23.16	V Q
13+40	9.9378	18.86	QV
13+45	10.0614	17.94	Q V
13+50	10.1824	17.57	Q V
13+55	10.3022	17.40	Q V
14+ 0	10.4221	17.41	Q V
14+ 5	10.5516	18.80	Q V
14+10	10.6920	20.39	QV
14+15	10.8348	20.74	Q V
14+20	10.9764	20.55	Q V
14+25	11.1157	20.24	Q V
14+30	11.2546	20.17	Q V
14+35	11.3933	20.14	Q V
14+40	11.5321	20.14	Q V
14+45	11.6709	20.15	Q V
14+50	11.8074	19.82	Q V
14+55	11.9413	19.44	Q V
15+ 0	12.0747	19.37	Q V
15+ 5	12.2056	19.00	Q V
15+10	12.3337	18.61	Q V
15+15	12.4614	18.54	Q V
15+20	12.5865	18.17	Q V
15+25	12.7089	17.77	Q V
15+30	12.8308	17.70	Q V
15+35	12.9431	16.30	Q V
15+40	13.0445	14.73	Q V
15+45	13.1436	14.40	Q V
15+50	13.2419	14.27	Q V
15+55	13.3398	14.21	Q V
16+ 0	13.4378	14.23	Q V
16+ 5	13.5045	9.68	Q V
16+10	13.5354	4.50	Q V
16+15	13.5587	3.38	Q V
16+20	13.5788	2.92	Q V
16+25	13.5973	2.69	Q V
16+30	13.6159	2.69	Q V
16+35	13.6326	2.43	Q V
16+40	13.6472	2.12	Q V
16+45	13.6614	2.06	Q V
16+50	13.6754	2.03	Q V
16+55	13.6893	2.02	Q V
17+ 0	13.7032	2.02	Q V
17+ 5	13.7207	2.55	Q V
17+10	13.7425	3.15	Q V
17+15	13.7651	3.28	Q V
17+20	13.7881	3.34	Q V
17+25	13.8113	3.36	Q V
17+30	13.8344	3.36	Q V
17+35	13.8576	3.36	Q V
17+40	13.8808	3.36	Q V
17+45	13.9039	3.36	Q V
17+50	13.9253	3.10	Q V
17+55	13.9446	2.80	Q V
18+ 0	13.9634	2.73	Q V
18+ 5	13.9820	2.70	Q V
18+10	14.0005	2.69	Q V
18+15	14.0191	2.69	Q V
18+20	14.0376	2.69	Q V
18+25	14.0562	2.69	Q V
18+30	14.0747	2.69	Q V
18+35	14.0914	2.43	Q V
18+40	14.1060	2.12	Q V
18+45	14.1202	2.06	Q V
18+50	14.1324	1.77	Q V
18+55	14.1424	1.45	Q V
19+ 0	14.1519	1.39	Q V
19+ 5	14.1631	1.62	Q V
19+10	14.1763	1.91	Q V
19+15	14.1899	1.98	Q V
19+20	14.2056	2.27	Q V
19+25	14.2234	2.59	Q V
19+30	14.2416	2.65	Q V
19+35	14.2582	2.41	Q V
19+40	14.2729	2.12	Q V
19+45	14.2871	2.06	Q V
19+50	14.2992	1.77	Q V
19+55	14.3092	1.45	Q V
20+ 0	14.3188	1.39	Q V
20+ 5	14.3300	1.62	Q V
20+10	14.3431	1.91	Q V
20+15	14.3568	1.98	Q V
20+20	14.3706	2.01	Q V
20+25	14.3845	2.02	Q V
20+30	14.3984	2.02	Q V
20+35	14.4123	2.02	Q V
20+40	14.4262	2.02	Q V
20+45	14.4401	2.02	Q V
20+50	14.4522	1.75	Q V
20+55	14.4622	1.45	Q V
21+ 0	14.4717	1.39	Q V
21+ 5	14.4829	1.62	Q V
21+10	14.4961	1.91	Q V
21+15	14.5097	1.98	Q V
21+20	14.5217	1.74	Q V
21+25	14.5317	1.45	Q V
21+30	14.5412	1.39	Q V
21+35	14.5524	1.62	Q V

21+40	14.5656	1.91	Q				V
21+45	14.5792	1.98	Q				V
21+50	14.5912	1.74	Q				V
21+55	14.6012	1.45	Q				V
22+ 0	14.6107	1.39	Q				V
22+ 5	14.6219	1.62	Q				V
22+10	14.6351	1.91	Q				V
22+15	14.6487	1.98	Q				V
22+20	14.6607	1.74	Q				V
22+25	14.6707	1.45	Q				V
22+30	14.6803	1.39	Q				V
22+35	14.6896	1.36	Q				V
22+40	14.6989	1.35	Q				V
22+45	14.7082	1.35	Q				V
22+50	14.7174	1.35	Q				V
22+55	14.7267	1.35	Q				V
23+ 0	14.7360	1.35	Q				V
23+ 5	14.7452	1.35	Q				V
23+10	14.7545	1.35	Q				V
23+15	14.7638	1.35	Q				V
23+20	14.7730	1.35	Q				V
23+25	14.7823	1.35	Q				V
23+30	14.7916	1.35	Q				V
23+35	14.8009	1.35	Q				V
23+40	14.8101	1.35	Q				V
23+45	14.8194	1.35	Q				V
23+50	14.8287	1.35	Q				V
23+55	14.8379	1.35	Q				V
24+ 0	14.8472	1.35	Q				V
24+ 5	14.8528	0.81	Q				V
24+10	14.8543	0.21	Q				V
24+15	14.8548	0.08	Q				V
24+20	14.8550	0.03	Q				V

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

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Study date 06/02/23 File: 3384PBBC1100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 2546.00(Ft.)
Length along longest watercourse measured to centroid = 1273.00(Ft.)
Length along longest watercourse = 0.482 Mi.
Length along longest watercourse measured to centroid = 0.241 Mi.
Difference in elevation = 47.25(Ft.)
Slope along watercourse = 97.9890 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.067 Hr.
Lag time = 3.99 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 1 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.52	12.42

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.15	27.47

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.520(In)
Area Averaged 100-Year Rainfall = 1.150(In)

Point rain (area averaged) = 1.150(In)
Areal adjustment factor = 99.98 %
Adjusted average point rain = 1.150(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	66.0	0.405	0.000	0.405	0.054	0.022
77.0	89.2	0.139	0.000	0.139	0.038	0.005
83.0	92.8	0.094	0.000	0.094	0.014	0.001
32.0	52.0	0.552	0.900	0.105	0.616	0.065
69.0	84.4	0.194	0.900	0.037	0.062	0.002
75.0	88.0	0.153	0.900	0.029	0.216	0.006
					Sum (F) =	0.102

Area averaged mean soil loss (F) (In/Hr) = 0.102
Minimum soil loss rate ((In/Hr)) = 0.051
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.5200

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	125.309	26.717	6.433
2	0.167	250.617	48.518	11.682
3	0.250	375.926	12.863	3.097
4	0.333	501.234	5.787	1.393
5	0.417	626.543	3.215	0.774
6	0.500	751.851	1.782	0.429
7	0.583	877.160	1.117	0.269
		Sum =	100.000 Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	4.10	0.566	0.102	(0.147)	0.464
2	0.17	4.60	0.635	0.102	(0.165)	0.533
3	0.25	4.50	0.621	0.102	(0.161)	0.519
4	0.33	4.90	0.676	0.102	(0.176)	0.574
5	0.42	5.50	0.759	0.102	(0.197)	0.657
6	0.50	6.40	0.883	0.102	(0.230)	0.781
7	0.58	7.10	0.980	0.102	(0.255)	0.878
8	0.67	9.00	1.242	0.102	(0.323)	1.140
9	0.75	12.90	1.780	0.102	(0.463)	1.678
10	0.83	29.50	4.070	0.102	(1.058)	3.968
11	0.92	7.00	0.966	0.102	(0.251)	0.864
12	1.00	4.50	0.621	0.102	(0.161)	0.519
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	12.6

Flood volume = Effective rainfall 1.05(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 2.1(Ac.Ft)
Total soil loss = 0.10(In)
Total soil loss = 0.202(Ac.Ft)
Total rainfall = 1.15(In)
Flood volume = 90886.7 Cubic Feet
Total soil loss = 8820.5 Cubic Feet

Peak flow rate of this hydrograph = 59.924(CFS)

1 - 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 15.0 30.0 45.0 60.0
0+ 5	0.0206	2.99	VQ
0+10	0.0815	8.85	V Q
0+15	0.1573	11.01	V Q
0+20	0.2404	12.06	V Q
0+25	0.3344	13.65	V Q
0+30	0.4434	15.82	V Q
0+35	0.5700	18.37	V Q
0+40	0.7197	21.75	VQ
0+45	0.9183	28.83	V Q
0+50	1.2692	50.95	V Q
0+55	1.6819	59.92	V Q
1+ 0	1.8854	29.55	Q V
1+ 5	1.9976	16.30	Q V
1+10	2.0453	6.91	Q V
1+15	2.0697	3.55	Q V
1+20	2.0824	1.84	Q V
1+25	2.0855	0.46	Q V
1+30	2.0865	0.14	Q V

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

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Study date 06/02/23 File: 3384PBBC3100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

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English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 2546.00(Ft.)
Length along longest watercourse measured to centroid = 1273.00(Ft.)
Length along longest watercourse = 0.482 Mi.
Length along longest watercourse measured to centroid = 0.241 Mi.
Difference in elevation = 47.25(Ft.)
Slope along watercourse = 97.9890 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.067 Hr.
Lag time = 3.99 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 3 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	0.95	22.70

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.90	45.39

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.950(In)
Area Averaged 100-Year Rainfall = 1.900(In)

Point rain (area averaged) = 1.900(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.900(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	66.0	0.405	0.000	0.405	0.054	0.022
77.0	89.2	0.139	0.000	0.139	0.038	0.005
83.0	92.8	0.094	0.000	0.094	0.014	0.001
32.0	52.0	0.552	0.900	0.105	0.616	0.065
69.0	84.4	0.194	0.900	0.037	0.062	0.002
75.0	88.0	0.153	0.900	0.029	0.216	0.006
					Sum (F) =	0.102

Area averaged mean soil loss (F) (In/Hr) = 0.102
Minimum soil loss rate ((In/Hr)) = 0.051
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	125.309	26.717	6.433
2	0.167	250.617	48.518	11.682
3	0.250	375.926	12.863	3.097
4	0.333	501.234	5.787	1.393
5	0.417	626.543	3.215	0.774
6	0.500	751.851	1.782	0.429
7	0.583	877.160	1.117	0.269
		Sum = 100.000	Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	1.30	0.296	(0.102)	0.077	0.219
2	0.17	1.30	0.296	(0.102)	0.077	0.219
3	0.25	1.10	0.251	(0.102)	0.065	0.186
4	0.33	1.50	0.342	(0.102)	0.089	0.253
5	0.42	1.50	0.342	(0.102)	0.089	0.253
6	0.50	1.80	0.410	0.102	(0.107)	0.309
7	0.58	1.50	0.342	(0.102)	0.089	0.253
8	0.67	1.80	0.410	0.102	(0.107)	0.309
9	0.75	1.80	0.410	0.102	(0.107)	0.309
10	0.83	1.50	0.342	(0.102)	0.089	0.253
11	0.92	1.60	0.365	(0.102)	0.095	0.270
12	1.00	1.80	0.410	0.102	(0.107)	0.309
13	1.08	2.20	0.502	0.102	(0.130)	0.400
14	1.17	2.20	0.502	0.102	(0.130)	0.400
15	1.25	2.20	0.502	0.102	(0.130)	0.400
16	1.33	2.00	0.456	0.102	(0.119)	0.354
17	1.42	2.60	0.593	0.102	(0.154)	0.491
18	1.50	2.70	0.616	0.102	(0.160)	0.514
19	1.58	2.40	0.547	0.102	(0.142)	0.445
20	1.67	2.70	0.616	0.102	(0.160)	0.514
21	1.75	3.30	0.752	0.102	(0.196)	0.651
22	1.83	3.10	0.707	0.102	(0.184)	0.605
23	1.92	2.90	0.661	0.102	(0.172)	0.559
24	2.00	3.00	0.684	0.102	(0.178)	0.582
25	2.08	3.10	0.707	0.102	(0.184)	0.605
26	2.17	4.20	0.957	0.102	(0.249)	0.856
27	2.25	5.00	1.140	0.102	(0.296)	1.038
28	2.33	3.50	0.798	0.102	(0.207)	0.696
29	2.42	6.80	1.550	0.102	(0.403)	1.449
30	2.50	7.30	1.664	0.102	(0.433)	1.563
31	2.58	8.20	1.869	0.102	(0.486)	1.768
32	2.67	5.90	1.345	0.102	(0.350)	1.243
33	2.75	2.00	0.456	0.102	(0.119)	0.354
34	2.83	1.80	0.410	0.102	(0.107)	0.309
35	2.92	1.80	0.410	0.102	(0.107)	0.309
36	3.00	0.60	0.137	(0.102)	0.036	0.101
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	19.3

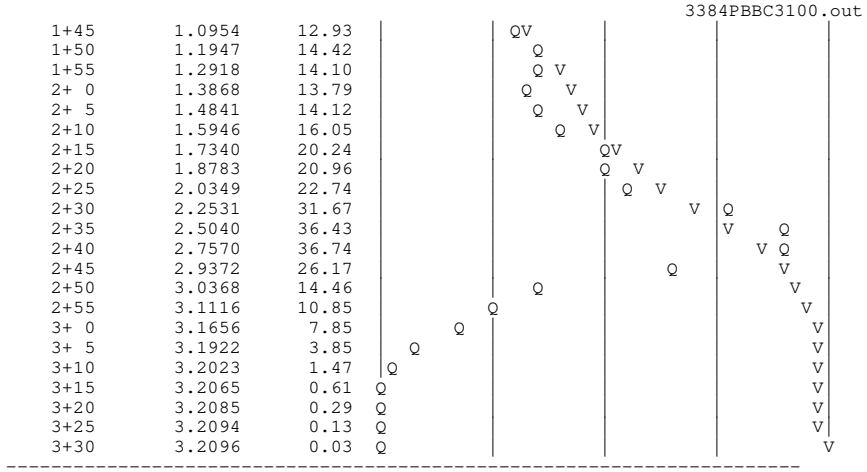
Flood volume = Effective rainfall 1.61(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 3.2(Ac.Ft)
Total soil loss = 0.29(In)
Total soil loss = 0.573(Ac.Ft)
Total rainfall = 1.90(In)
Flood volume = 139808.6 Cubic Feet
Total soil loss = 24943.5 Cubic Feet

Peak flow rate of this hydrograph = 36.738(CFS)

3 - 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	0.0097	1.41	VQ				
0+10	0.0371	3.97	V Q				
0+15	0.0677	4.44	V Q				
0+20	0.1006	4.78	V Q				
0+25	0.1394	5.64	V Q				
0+30	0.1825	6.25	V Q				
0+35	0.2284	6.67	V Q				
0+40	0.2738	6.59	V Q				
0+45	0.3231	7.16	V Q				
0+50	0.3710	6.96	V Q				
0+55	0.4157	6.48	VQ				
1+ 0	0.4624	6.79	VQ				
1+ 5	0.5162	7.81	VQ				
1+10	0.5781	8.99	VQ				
1+15	0.6423	9.32	VQ				
1+20	0.7054	9.17	VQ				
1+25	0.7716	9.61	Q				
1+30	0.8492	11.27	VQ				
1+35	0.9282	11.48	Q				
1+40	1.0064	11.34	QV				



1+45	1.0954	12.93	
1+50	1.1947	14.42	
1+55	1.2918	14.10	
2+ 0	1.3868	13.79	
2+ 5	1.4841	14.12	
2+10	1.5946	16.05	
2+15	1.7340	20.24	
2+20	1.8783	20.96	
2+25	2.0349	22.74	
2+30	2.2531	31.67	
2+35	2.5040	36.43	
2+40	2.7570	36.74	
2+45	2.9372	26.17	
2+50	3.0368	14.46	
2+55	3.1116	10.85	
3+ 0	3.1656	7.85	
3+ 5	3.1922	3.85	
3+10	3.2023	1.47	
3+15	3.2065	0.61	
3+20	3.2085	0.29	
3+25	3.2094	0.13	
3+30	3.2096	0.03	

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

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Study date 06/02/23 File: 3384PBBC6100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 2546.00(Ft.)
Length along longest watercourse measured to centroid = 1273.00(Ft.)
Length along longest watercourse = 0.482 Mi.
Length along longest watercourse measured to centroid = 0.241 Mi.
Difference in elevation = 47.25(Ft.)
Slope along watercourse = 97.9890 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.067 Hr.
Lag time = 3.99 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 6 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	1.30	31.06

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.50	59.73

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.300(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 2.500(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 2.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	66.0	0.405	0.000	0.405	0.054	0.022
77.0	89.2	0.139	0.000	0.139	0.038	0.005
83.0	92.8	0.094	0.000	0.094	0.014	0.001
32.0	52.0	0.552	0.900	0.105	0.616	0.065
69.0	84.4	0.194	0.900	0.037	0.062	0.002
75.0	88.0	0.153	0.900	0.029	0.216	0.006
					Sum (F) =	0.102

Area averaged mean soil loss (F) (In/Hr) = 0.102
Minimum soil loss rate ((In/Hr)) = 0.051
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	125.309	26.717	6.433
2	0.167	250.617	48.518	11.682
3	0.250	375.926	12.863	3.097
4	0.333	501.234	5.787	1.393
5	0.417	626.543	3.215	0.774
6	0.500	751.851	1.782	0.429
7	0.583	877.160	1.117	0.269
		Sum = 100.000	Sum=	24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.50	0.150	(0.102)	0.039	0.111
2	0.17	0.60	0.180	(0.102)	0.047	0.133
3	0.25	0.60	0.180	(0.102)	0.047	0.133
4	0.33	0.60	0.180	(0.102)	0.047	0.133
5	0.42	0.60	0.180	(0.102)	0.047	0.133
6	0.50	0.70	0.210	(0.102)	0.055	0.155
7	0.58	0.70	0.210	(0.102)	0.055	0.155
8	0.67	0.70	0.210	(0.102)	0.055	0.155
9	0.75	0.70	0.210	(0.102)	0.055	0.155
10	0.83	0.70	0.210	(0.102)	0.055	0.155
11	0.92	0.70	0.210	(0.102)	0.055	0.155
12	1.00	0.80	0.240	(0.102)	0.062	0.178
13	1.08	0.80	0.240	(0.102)	0.062	0.178
14	1.17	0.80	0.240	(0.102)	0.062	0.178
15	1.25	0.80	0.240	(0.102)	0.062	0.178
16	1.33	0.80	0.240	(0.102)	0.062	0.178
17	1.42	0.80	0.240	(0.102)	0.062	0.178
18	1.50	0.80	0.240	(0.102)	0.062	0.178
19	1.58	0.80	0.240	(0.102)	0.062	0.178
20	1.67	0.80	0.240	(0.102)	0.062	0.178
21	1.75	0.80	0.240	(0.102)	0.062	0.178
22	1.83	0.80	0.240	(0.102)	0.062	0.178
23	1.92	0.80	0.240	(0.102)	0.062	0.178
24	2.00	0.90	0.270	(0.102)	0.070	0.200
25	2.08	0.80	0.240	(0.102)	0.062	0.178
26	2.17	0.90	0.270	(0.102)	0.070	0.200
27	2.25	0.90	0.270	(0.102)	0.070	0.200
28	2.33	0.90	0.270	(0.102)	0.070	0.200
29	2.42	0.90	0.270	(0.102)	0.070	0.200
30	2.50	0.90	0.270	(0.102)	0.070	0.200
31	2.58	0.90	0.270	(0.102)	0.070	0.200
32	2.67	0.90	0.270	(0.102)	0.070	0.200
33	2.75	1.00	0.300	(0.102)	0.078	0.222
34	2.83	1.00	0.300	(0.102)	0.078	0.222
35	2.92	1.00	0.300	(0.102)	0.078	0.222
36	3.00	1.00	0.300	(0.102)	0.078	0.222
37	3.08	1.00	0.300	(0.102)	0.078	0.222
38	3.17	1.10	0.330	(0.102)	0.086	0.244
39	3.25	1.10	0.330	(0.102)	0.086	0.244
40	3.33	1.10	0.330	(0.102)	0.086	0.244
41	3.42	1.20	0.360	(0.102)	0.094	0.266
42	3.50	1.30	0.390	(0.102)	0.101	0.289
43	3.58	1.40	0.420	0.102	(0.109)	0.318
44	3.67	1.40	0.420	0.102	(0.109)	0.318
45	3.75	1.50	0.450	0.102	(0.117)	0.348
46	3.83	1.50	0.450	0.102	(0.117)	0.348
47	3.92	1.60	0.480	0.102	(0.125)	0.378
48	4.00	1.60	0.480	0.102	(0.125)	0.378
49	4.08	1.70	0.510	0.102	(0.133)	0.408
50	4.17	1.80	0.540	0.102	(0.140)	0.438
51	4.25	1.90	0.570	0.102	(0.148)	0.468
52	4.33	2.00	0.600	0.102	(0.156)	0.498
53	4.42	2.10	0.630	0.102	(0.164)	0.528
54	4.50	2.10	0.630	0.102	(0.164)	0.528
55	4.58	2.20	0.660	0.102	(0.172)	0.558
56	4.67	2.30	0.690	0.102	(0.179)	0.588
57	4.75	2.40	0.720	0.102	(0.187)	0.618
58	4.83	2.40	0.720	0.102	(0.187)	0.618
59	4.92	2.50	0.750	0.102	(0.195)	0.648
60	5.00	2.60	0.780	0.102	(0.203)	0.678
61	5.08	3.10	0.930	0.102	(0.242)	0.828
62	5.17	3.60	1.080	0.102	(0.281)	0.978
63	5.25	3.90	1.170	0.102	(0.304)	1.068
64	5.33	4.20	1.260	0.102	(0.328)	1.158
65	5.42	4.70	1.410	0.102	(0.367)	1.308
66	5.50	5.60	1.680	0.102	(0.437)	1.578
67	5.58	1.90	0.570	0.102	(0.148)	0.468
68	5.67	0.90	0.270	(0.102)	0.070	0.200
69	5.75	0.60	0.180	(0.102)	0.047	0.133
70	5.83	0.50	0.150	(0.102)	0.039	0.111
71	5.92	0.30	0.090	(0.102)	0.023	0.067
72	6.00	0.20	0.060	(0.102)	0.016	0.044
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	24.5

Flood volume = Effective rainfall 2.04(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 4.1(Ac.Ft)
Total soil loss = 0.46(In)

Total soil loss = 0.914(Ac.Ft)
Total rainfall = 2.50(In)
Flood volume = 176989.7 Cubic Feet
Total soil loss = 39794.3 Cubic Feet

Peak flow rate of this hydrograph = 31.820(CFS)

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6 - 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	0.0049	0.71	Q				
0+10	0.0198	2.15	V Q				
0+15	0.0388	2.76	V Q				
0+20	0.0593	2.98	V Q				
0+25	0.0806	3.10	V Q				
0+30	0.1034	3.31	V Q				
0+35	0.1282	3.60	V Q				
0+40	0.1536	3.68	V Q				
0+45	0.1791	3.71	V Q				
0+50	0.2048	3.73	VQ				
0+55	0.2305	3.74	VQ				
1+ 0	0.2573	3.89	VQ				
1+ 5	0.2858	4.15	V Q				
1+10	0.3149	4.21	VQ				
1+15	0.3441	4.25	VQ				
1+20	0.3734	4.26	VQ				
1+25	0.4029	4.27	VQ				
1+30	0.4323	4.28	Q				
1+35	0.4618	4.28	Q				
1+40	0.4913	4.28	Q				
1+45	0.5207	4.28	QV				
1+50	0.5502	4.28	QV				
1+55	0.5796	4.28	QV				
2+ 0	0.6101	4.42	Q V				
2+ 5	0.6413	4.54	Q V				
2+10	0.6723	4.49	Q V				
2+15	0.7047	4.71	Q V				
2+20	0.7375	4.77	Q V				
2+25	0.7705	4.79	Q V				
2+30	0.8036	4.80	Q V				
2+35	0.8367	4.81	Q V				
2+40	0.8698	4.81	Q V				
2+45	0.9040	4.96	Q V				
2+50	0.9399	5.21	Q V				
2+55	0.9763	5.28	Q V				
3+ 0	1.0129	5.31	Q V				
3+ 5	1.0496	5.33	Q V				
3+10	1.0874	5.48	Q V				
3+15	1.1270	5.75	Q V				
3+20	1.1670	5.82	Q V				
3+25	1.2083	5.99	Q V				
3+30	1.2525	6.41	Q V				
3+35	1.3003	6.94	Q V				
3+40	1.3512	7.39	Q V				
3+45	1.4044	7.73	Q V				
3+50	1.4605	8.14	Q V				
3+55	1.5188	8.47	Q V				
4+ 0	1.5800	8.88	Q V				
4+ 5	1.6433	9.20	Q V				
4+10	1.7108	9.80	Q V				
4+15	1.7829	10.46	Q V				
4+20	1.8597	11.16	Q V				
4+25	1.9414	11.87	Q V				
4+30	2.0267	12.39	Q V				
4+35	2.1146	12.76	Q V				
4+40	2.2068	13.39	Q V				
4+45	2.3037	14.07	Q V				
4+50	2.4041	14.58	Q V				
4+55	2.5069	14.93	Q V				
5+ 0	2.6140	15.56	Q V				
5+ 5	2.7312	17.01	Q V				
5+10	2.8681	19.88	Q V				
5+15	3.0248	22.75	Q V				
5+20	3.1976	25.09	Q V				
5+25	3.3887	27.74	Q V				
5+30	3.6078	31.82	Q V				
5+35	3.8048	28.60	Q V				
5+40	3.9087	15.09	Q V				
5+45	3.9682	8.64	Q V				
5+50	4.0070	5.64	Q V				
5+55	4.0333	3.81	Q V				
6+ 0	4.0496	2.37	Q V				
6+ 5	4.0578	1.19	Q V				
6+10	4.0608	0.43	Q V				
6+15	4.0621	0.20	Q V				
6+20	4.0628	0.09	Q V				
6+25	4.0630	0.04	Q V				
6+30	4.0631	0.01	Q V				

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

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Study date 06/02/23 File: 3384PBBC24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6400

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
HYDROLOGIC ANALYSIS - 100-YEAR

Drainage Area = 23.89(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.89(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 2546.00(Ft.)
Length along longest watercourse measured to centroid = 1273.00(Ft.)
Length along longest watercourse = 0.482 Mi.
Length along longest watercourse measured to centroid = 0.241 Mi.
Difference in elevation = 47.25(Ft.)
Slope along watercourse = 97.9890 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.067 Hr.
Lag time = 3.99 Min.
25% of lag time = 1.00 Min.
40% of lag time = 1.60 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	2.00	47.78

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.89	5.50	131.40

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 2.000(In)
Area Averaged 100-Year Rainfall = 5.500(In)

Point rain (area averaged) = 5.500(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 5.500(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
1.300	46.00	0.000
0.900	77.00	0.000
0.330	83.00	0.000
14.720	32.00	0.900
1.480	69.00	0.900
5.160	75.00	0.900

Total Area Entered = 23.89(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
46.0	66.0	0.405	0.000	0.405	0.054	0.022
77.0	89.2	0.139	0.000	0.139	0.038	0.005
83.0	92.8	0.094	0.000	0.094	0.014	0.001
32.0	52.0	0.552	0.900	0.105	0.616	0.065
69.0	84.4	0.194	0.900	0.037	0.062	0.002
75.0	88.0	0.153	0.900	0.029	0.216	0.006
					Sum (F) =	0.102

Area averaged mean soil loss (F) (In/Hr) = 0.102
Minimum soil loss rate ((In/Hr)) = 0.051
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	125.309	26.717	6.433
2	0.167	250.617	48.518	11.682
3	0.250	375.926	12.863	3.097
4	0.333	501.234	5.787	1.393
5	0.417	626.543	3.215	0.774
6	0.500	751.851	1.782	0.429
7	0.583	877.160	1.117	0.269
			Sum = 100.000	Sum= 24.077

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.044	(0.180)	0.011	0.033
2	0.17	0.07	0.044	(0.180)	0.011	0.033
3	0.25	0.07	0.044	(0.179)	0.011	0.033
4	0.33	0.10	0.066	(0.178)	0.017	0.049
5	0.42	0.10	0.066	(0.178)	0.017	0.049
6	0.50	0.10	0.066	(0.177)	0.017	0.049
7	0.58	0.10	0.066	(0.176)	0.017	0.049
8	0.67	0.10	0.066	(0.175)	0.017	0.049
9	0.75	0.10	0.066	(0.175)	0.017	0.049
10	0.83	0.13	0.088	(0.174)	0.023	0.065
11	0.92	0.13	0.088	(0.173)	0.023	0.065
12	1.00	0.13	0.088	(0.173)	0.023	0.065
13	1.08	0.10	0.066	(0.172)	0.017	0.049
14	1.17	0.10	0.066	(0.171)	0.017	0.049
15	1.25	0.10	0.066	(0.171)	0.017	0.049
16	1.33	0.10	0.066	(0.170)	0.017	0.049
17	1.42	0.10	0.066	(0.169)	0.017	0.049
18	1.50	0.10	0.066	(0.169)	0.017	0.049
19	1.58	0.10	0.066	(0.168)	0.017	0.049
20	1.67	0.10	0.066	(0.167)	0.017	0.049
21	1.75	0.10	0.066	(0.167)	0.017	0.049
22	1.83	0.13	0.088	(0.166)	0.023	0.065
23	1.92	0.13	0.088	(0.165)	0.023	0.065
24	2.00	0.13	0.088	(0.165)	0.023	0.065
25	2.08	0.13	0.088	(0.164)	0.023	0.065
26	2.17	0.13	0.088	(0.163)	0.023	0.065
27	2.25	0.13	0.088	(0.163)	0.023	0.065
28	2.33	0.13	0.088	(0.162)	0.023	0.065
29	2.42	0.13	0.088	(0.161)	0.023	0.065
30	2.50	0.13	0.088	(0.161)	0.023	0.065
31	2.58	0.17	0.110	(0.160)	0.029	0.081
32	2.67	0.17	0.110	(0.159)	0.029	0.081
33	2.75	0.17	0.110	(0.159)	0.029	0.081
34	2.83	0.17	0.110	(0.158)	0.029	0.081
35	2.92	0.17	0.110	(0.157)	0.029	0.081
36	3.00	0.17	0.110	(0.157)	0.029	0.081
37	3.08	0.17	0.110	(0.156)	0.029	0.081
38	3.17	0.17	0.110	(0.155)	0.029	0.081
39	3.25	0.17	0.110	(0.155)	0.029	0.081
40	3.33	0.17	0.110	(0.154)	0.029	0.081
41	3.42	0.17	0.110	(0.153)	0.029	0.081
42	3.50	0.17	0.110	(0.153)	0.029	0.081
43	3.58	0.17	0.110	(0.152)	0.029	0.081
44	3.67	0.17	0.110	(0.152)	0.029	0.081
45	3.75	0.17	0.110	(0.151)	0.029	0.081
46	3.83	0.20	0.132	(0.150)	0.034	0.098
47	3.92	0.20	0.132	(0.150)	0.034	0.098
48	4.00	0.20	0.132	(0.149)	0.034	0.098
49	4.08	0.20	0.132	(0.148)	0.034	0.098
50	4.17	0.20	0.132	(0.148)	0.034	0.098
51	4.25	0.20	0.132	(0.147)	0.034	0.098
52	4.33	0.23	0.154	(0.146)	0.040	0.114
53	4.42	0.23	0.154	(0.146)	0.040	0.114
54	4.50	0.23	0.154	(0.145)	0.040	0.114
55	4.58	0.23	0.154	(0.145)	0.040	0.114
56	4.67	0.23	0.154	(0.144)	0.040	0.114
57	4.75	0.23	0.154	(0.143)	0.040	0.114
58	4.83	0.27	0.176	(0.143)	0.046	0.130
59	4.92	0.27	0.176	(0.142)	0.046	0.130
60	5.00	0.27	0.176	(0.142)	0.046	0.130
61	5.08	0.20	0.132	(0.141)	0.034	0.098
62	5.17	0.20	0.132	(0.140)	0.034	0.098
63	5.25	0.20	0.132	(0.140)	0.034	0.098
64	5.33	0.23	0.154	(0.139)	0.040	0.114
65	5.42	0.23	0.154	(0.138)	0.040	0.114
66	5.50	0.23	0.154	(0.138)	0.040	0.114
67	5.58	0.27	0.176	(0.137)	0.046	0.130
68	5.67	0.27	0.176	(0.137)	0.046	0.130
69	5.75	0.27	0.176	(0.136)	0.046	0.130
70	5.83	0.27	0.176	(0.135)	0.046	0.130
71	5.92	0.27	0.176	(0.135)	0.046	0.130
72	6.00	0.27	0.176	(0.134)	0.046	0.130
73	6.08	0.30	0.198	(0.134)	0.051	0.147
74	6.17	0.30	0.198	(0.133)	0.051	0.147
75	6.25	0.30	0.198	(0.132)	0.051	0.147
76	6.33	0.30	0.198	(0.132)	0.051	0.147
77	6.42	0.30	0.198	(0.131)	0.051	0.147

78	6.50	0.30	0.198	(0.131)	0.051	0.147
79	6.58	0.33	0.220	(0.130)	0.057	0.163
80	6.67	0.33	0.220	(0.130)	0.057	0.163
81	6.75	0.33	0.220	(0.129)	0.057	0.163
82	6.83	0.33	0.220	(0.128)	0.057	0.163
83	6.92	0.33	0.220	(0.128)	0.057	0.163
84	7.00	0.33	0.220	(0.127)	0.057	0.163
85	7.08	0.33	0.220	(0.127)	0.057	0.163
86	7.17	0.33	0.220	(0.126)	0.057	0.163
87	7.25	0.33	0.220	(0.125)	0.057	0.163
88	7.33	0.37	0.242	(0.125)	0.063	0.179
89	7.42	0.37	0.242	(0.124)	0.063	0.179
90	7.50	0.37	0.242	(0.124)	0.063	0.179
91	7.58	0.40	0.264	(0.123)	0.069	0.195
92	7.67	0.40	0.264	(0.123)	0.069	0.195
93	7.75	0.40	0.264	(0.122)	0.069	0.195
94	7.83	0.43	0.286	(0.121)	0.074	0.212
95	7.92	0.43	0.286	(0.121)	0.074	0.212
96	8.00	0.43	0.286	(0.120)	0.074	0.212
97	8.08	0.50	0.330	(0.120)	0.086	0.244
98	8.17	0.50	0.330	(0.119)	0.086	0.244
99	8.25	0.50	0.330	(0.119)	0.086	0.244
100	8.33	0.50	0.330	(0.118)	0.086	0.244
101	8.42	0.50	0.330	(0.118)	0.086	0.244
102	8.50	0.50	0.330	(0.117)	0.086	0.244
103	8.58	0.53	0.352	(0.116)	0.092	0.260
104	8.67	0.53	0.352	(0.116)	0.092	0.260
105	8.75	0.53	0.352	(0.115)	0.092	0.260
106	8.83	0.57	0.374	(0.115)	0.097	0.277
107	8.92	0.57	0.374	(0.114)	0.097	0.277
108	9.00	0.57	0.374	(0.114)	0.097	0.277
109	9.08	0.63	0.418	(0.113)	0.109	0.309
110	9.17	0.63	0.418	(0.113)	0.109	0.309
111	9.25	0.63	0.418	(0.112)	0.109	0.309
112	9.33	0.67	0.440	0.112	(0.114)	0.328
113	9.42	0.67	0.440	0.111	(0.114)	0.329
114	9.50	0.67	0.440	0.111	(0.114)	0.329
115	9.58	0.70	0.462	0.110	(0.120)	0.352
116	9.67	0.70	0.462	0.110	(0.120)	0.352
117	9.75	0.70	0.462	0.109	(0.120)	0.353
118	9.83	0.73	0.484	0.108	(0.126)	0.376
119	9.92	0.73	0.484	0.108	(0.126)	0.376
120	10.00	0.73	0.484	0.107	(0.126)	0.377
121	10.08	0.50	0.330	(0.107)	0.086	0.244
122	10.17	0.50	0.330	(0.106)	0.086	0.244
123	10.25	0.50	0.330	(0.106)	0.086	0.244
124	10.33	0.50	0.330	(0.105)	0.086	0.244
125	10.42	0.50	0.330	(0.105)	0.086	0.244
126	10.50	0.50	0.330	(0.104)	0.086	0.244
127	10.58	0.67	0.440	0.104	(0.114)	0.336
128	10.67	0.67	0.440	0.103	(0.114)	0.337
129	10.75	0.67	0.440	0.103	(0.114)	0.337
130	10.83	0.67	0.440	0.102	(0.114)	0.338
131	10.92	0.67	0.440	0.102	(0.114)	0.338
132	11.00	0.67	0.440	0.101	(0.114)	0.339
133	11.08	0.63	0.418	0.101	(0.109)	0.317
134	11.17	0.63	0.418	0.100	(0.109)	0.318
135	11.25	0.63	0.418	0.100	(0.109)	0.318
136	11.33	0.63	0.418	0.099	(0.109)	0.319
137	11.42	0.63	0.418	0.099	(0.109)	0.319
138	11.50	0.63	0.418	0.098	(0.109)	0.320
139	11.58	0.57	0.374	(0.098)	0.097	0.277
140	11.67	0.57	0.374	(0.097)	0.097	0.277
141	11.75	0.57	0.374	0.097	(0.097)	0.277
142	11.83	0.60	0.396	0.096	(0.103)	0.300
143	11.92	0.60	0.396	0.096	(0.103)	0.300
144	12.00	0.60	0.396	0.095	(0.103)	0.301
145	12.08	0.83	0.550	0.095	(0.143)	0.455
146	12.17	0.83	0.550	0.094	(0.143)	0.456
147	12.25	0.83	0.550	0.094	(0.143)	0.456
148	12.33	0.87	0.572	0.094	(0.149)	0.478
149	12.42	0.87	0.572	0.093	(0.149)	0.479
150	12.50	0.87	0.572	0.093	(0.149)	0.479
151	12.58	0.93	0.616	0.092	(0.160)	0.524
152	12.67	0.93	0.616	0.092	(0.160)	0.524
153	12.75	0.93	0.616	0.091	(0.160)	0.525
154	12.83	0.97	0.638	0.091	(0.166)	0.547
155	12.92	0.97	0.638	0.090	(0.166)	0.548
156	13.00	0.97	0.638	0.090	(0.166)	0.548
157	13.08	1.13	0.748	0.089	(0.194)	0.659
158	13.17	1.13	0.748	0.089	(0.194)	0.659
159	13.25	1.13	0.748	0.088	(0.194)	0.660
160	13.33	1.13	0.748	0.088	(0.194)	0.660
161	13.42	1.13	0.748	0.088	(0.194)	0.660
162	13.50	1.13	0.748	0.087	(0.194)	0.661
163	13.58	0.77	0.506	0.087	(0.132)	0.419
164	13.67	0.77	0.506	0.086	(0.132)	0.420
165	13.75	0.77	0.506	0.086	(0.132)	0.420
166	13.83	0.77	0.506	0.085	(0.132)	0.421
167	13.92	0.77	0.506	0.085	(0.132)	0.421
168	14.00	0.77	0.506	0.084	(0.132)	0.421
169	14.08	0.90	0.594	0.084	(0.154)	0.510
170	14.17	0.90	0.594	0.084	(0.154)	0.510
171	14.25	0.90	0.594	0.083	(0.154)	0.511
172	14.33	0.87	0.572	0.083	(0.149)	0.489
173	14.42	0.87	0.572	0.082	(0.149)	0.490
174	14.50	0.87	0.572	0.082	(0.149)	0.490

175	14.58	0.87	0.572	0.082	(0.149)	0.490
176	14.67	0.87	0.572	0.081	(0.149)	0.491
177	14.75	0.87	0.572	0.081	(0.149)	0.491
178	14.83	0.83	0.550	0.080	(0.143)	0.470
179	14.92	0.83	0.550	0.080	(0.143)	0.470
180	15.00	0.83	0.550	0.079	(0.143)	0.471
181	15.08	0.80	0.528	0.079	(0.137)	0.449
182	15.17	0.80	0.528	0.079	(0.137)	0.449
183	15.25	0.80	0.528	0.078	(0.137)	0.450
184	15.33	0.77	0.506	0.078	(0.132)	0.428
185	15.42	0.77	0.506	0.077	(0.132)	0.429
186	15.50	0.77	0.506	0.077	(0.132)	0.429
187	15.58	0.63	0.418	0.077	(0.109)	0.341
188	15.67	0.63	0.418	0.076	(0.109)	0.342
189	15.75	0.63	0.418	0.076	(0.109)	0.342
190	15.83	0.63	0.418	0.075	(0.109)	0.343
191	15.92	0.63	0.418	0.075	(0.109)	0.343
192	16.00	0.63	0.418	0.075	(0.109)	0.343
193	16.08	0.13	0.088	(0.074)	0.023	0.065
194	16.17	0.13	0.088	(0.074)	0.023	0.065
195	16.25	0.13	0.088	(0.074)	0.023	0.065
196	16.33	0.13	0.088	(0.073)	0.023	0.065
197	16.42	0.13	0.088	(0.073)	0.023	0.065
198	16.50	0.13	0.088	(0.072)	0.023	0.065
199	16.58	0.10	0.066	(0.072)	0.017	0.049
200	16.67	0.10	0.066	(0.072)	0.017	0.049
201	16.75	0.10	0.066	(0.071)	0.017	0.049
202	16.83	0.10	0.066	(0.071)	0.017	0.049
203	16.92	0.10	0.066	(0.071)	0.017	0.049
204	17.00	0.10	0.066	(0.070)	0.017	0.049
205	17.08	0.17	0.110	(0.070)	0.029	0.081
206	17.17	0.17	0.110	(0.070)	0.029	0.081
207	17.25	0.17	0.110	(0.069)	0.029	0.081
208	17.33	0.17	0.110	(0.069)	0.029	0.081
209	17.42	0.17	0.110	(0.069)	0.029	0.081
210	17.50	0.17	0.110	(0.068)	0.029	0.081
211	17.58	0.17	0.110	(0.068)	0.029	0.081
212	17.67	0.17	0.110	(0.067)	0.029	0.081
213	17.75	0.17	0.110	(0.067)	0.029	0.081
214	17.83	0.13	0.088	(0.067)	0.023	0.065
215	17.92	0.13	0.088	(0.066)	0.023	0.065
216	18.00	0.13	0.088	(0.066)	0.023	0.065
217	18.08	0.13	0.088	(0.066)	0.023	0.065
218	18.17	0.13	0.088	(0.066)	0.023	0.065
219	18.25	0.13	0.088	(0.065)	0.023	0.065
220	18.33	0.13	0.088	(0.065)	0.023	0.065
221	18.42	0.13	0.088	(0.065)	0.023	0.065
222	18.50	0.13	0.088	(0.064)	0.023	0.065
223	18.58	0.10	0.066	(0.064)	0.017	0.049
224	18.67	0.10	0.066	(0.064)	0.017	0.049
225	18.75	0.10	0.066	(0.063)	0.017	0.049
226	18.83	0.07	0.044	(0.063)	0.011	0.033
227	18.92	0.07	0.044	(0.063)	0.011	0.033
228	19.00	0.07	0.044	(0.062)	0.011	0.033
229	19.08	0.10	0.066	(0.062)	0.017	0.049
230	19.17	0.10	0.066	(0.062)	0.017	0.049
231	19.25	0.10	0.066	(0.062)	0.017	0.049
232	19.33	0.13	0.088	(0.061)	0.023	0.065
233	19.42	0.13	0.088	(0.061)	0.023	0.065
234	19.50	0.13	0.088	(0.061)	0.023	0.065
235	19.58	0.10	0.066	(0.060)	0.017	0.049
236	19.67	0.10	0.066	(0.060)	0.017	0.049
237	19.75	0.10	0.066	(0.060)	0.017	0.049
238	19.83	0.07	0.044	(0.060)	0.011	0.033
239	19.92	0.07	0.044	(0.059)	0.011	0.033
240	20.00	0.07	0.044	(0.059)	0.011	0.033
241	20.08	0.10	0.066	(0.059)	0.017	0.049
242	20.17	0.10	0.066	(0.059)	0.017	0.049
243	20.25	0.10	0.066	(0.058)	0.017	0.049
244	20.33	0.10	0.066	(0.058)	0.017	0.049
245	20.42	0.10	0.066	(0.058)	0.017	0.049
246	20.50	0.10	0.066	(0.058)	0.017	0.049
247	20.58	0.10	0.066	(0.057)	0.017	0.049
248	20.67	0.10	0.066	(0.057)	0.017	0.049
249	20.75	0.10	0.066	(0.057)	0.017	0.049
250	20.83	0.07	0.044	(0.057)	0.011	0.033
251	20.92	0.07	0.044	(0.056)	0.011	0.033
252	21.00	0.07	0.044	(0.056)	0.011	0.033
253	21.08	0.10	0.066	(0.056)	0.017	0.049
254	21.17	0.10	0.066	(0.056)	0.017	0.049
255	21.25	0.10	0.066	(0.055)	0.017	0.049
256	21.33	0.07	0.044	(0.055)	0.011	0.033
257	21.42	0.07	0.044	(0.055)	0.011	0.033
258	21.50	0.07	0.044	(0.055)	0.011	0.033
259	21.58	0.10	0.066	(0.055)	0.017	0.049
260	21.67	0.10	0.066	(0.054)	0.017	0.049
261	21.75	0.10	0.066	(0.054)	0.017	0.049
262	21.83	0.07	0.044	(0.054)	0.011	0.033
263	21.92	0.07	0.044	(0.054)	0.011	0.033
264	22.00	0.07	0.044	(0.054)	0.011	0.033
265	22.08	0.10	0.066	(0.054)	0.017	0.049
266	22.17	0.10	0.066	(0.053)	0.017	0.049
267	22.25	0.10	0.066	(0.053)	0.017	0.049
268	22.33	0.07	0.044	(0.053)	0.011	0.033
269	22.42	0.07	0.044	(0.053)	0.011	0.033
270	22.50	0.07	0.044	(0.053)	0.011	0.033
271	22.58	0.07	0.044	(0.053)	0.011	0.033

272	22.67	0.07	0.044	(0.052)	0.011	0.033
273	22.75	0.07	0.044	(0.052)	0.011	0.033
274	22.83	0.07	0.044	(0.052)	0.011	0.033
275	22.92	0.07	0.044	(0.052)	0.011	0.033
276	23.00	0.07	0.044	(0.052)	0.011	0.033
277	23.08	0.07	0.044	(0.052)	0.011	0.033
278	23.17	0.07	0.044	(0.052)	0.011	0.033
279	23.25	0.07	0.044	(0.052)	0.011	0.033
280	23.33	0.07	0.044	(0.051)	0.011	0.033
281	23.42	0.07	0.044	(0.051)	0.011	0.033
282	23.50	0.07	0.044	(0.051)	0.011	0.033
283	23.58	0.07	0.044	(0.051)	0.011	0.033
284	23.67	0.07	0.044	(0.051)	0.011	0.033
285	23.75	0.07	0.044	(0.051)	0.011	0.033
286	23.83	0.07	0.044	(0.051)	0.011	0.033
287	23.92	0.07	0.044	(0.051)	0.011	0.033
288	24.00	0.07	0.044	(0.051)	0.011	0.033

(Loss Rate Not Used)

Sum = 100.0 Sum = 52.1

Flood volume = Effective rainfall 4.34(In)
times area 23.9(Ac.)/[(In)/(Ft.)] = 8.6(Ac.Ft)
Total soil loss = 1.16(In)
Total soil loss = 2.309(Ac.Ft)
Total rainfall = 5.50(In)
Flood volume = 376359.5 Cubic Feet
Total soil loss = 100582.1 Cubic Feet

Peak flow rate of this hydrograph = 15.877(CFS)

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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	0.0014	0.21	Q
0+10	0.0055	0.59	VQ
0+15	0.0103	0.69	VQ
0+20	0.0161	0.84	VQ
0+25	0.0233	1.06	V Q
0+30	0.0311	1.12	V Q
0+35	0.0390	1.15	V Q
0+40	0.0470	1.17	V Q
0+45	0.0551	1.17	V Q
0+50	0.0639	1.28	V Q
0+55	0.0740	1.47	V Q
1+ 0	0.0845	1.52	V Q
1+ 5	0.0944	1.44	V Q
1+10	0.1031	1.26	V Q
1+15	0.1115	1.22	V Q
1+20	0.1198	1.20	V Q
1+25	0.1280	1.19	V Q
1+30	0.1361	1.18	V Q
1+35	0.1442	1.18	V Q
1+40	0.1523	1.18	V Q
1+45	0.1604	1.18	V Q
1+50	0.1692	1.28	V Q
1+55	0.1794	1.47	V Q
2+ 0	0.1899	1.52	V Q
2+ 5	0.2005	1.54	V Q
2+10	0.2112	1.56	V Q
2+15	0.2220	1.56	V Q
2+20	0.2328	1.57	V Q
2+25	0.2436	1.57	V Q
2+30	0.2544	1.57	V Q
2+35	0.2659	1.67	V Q
2+40	0.2788	1.86	V Q
2+45	0.2919	1.91	V Q
2+50	0.3053	1.94	V Q
2+55	0.3187	1.95	V Q
3+ 0	0.3322	1.96	V Q
3+ 5	0.3457	1.96	V Q
3+10	0.3592	1.96	V Q
3+15	0.3727	1.96	V Q
3+20	0.3862	1.96	V Q
3+25	0.3997	1.96	V Q
3+30	0.4132	1.96	V Q
3+35	0.4267	1.96	V Q
3+40	0.4402	1.96	VQ
3+45	0.4537	1.96	VQ
3+50	0.4679	2.07	V Q
3+55	0.4835	2.26	V Q
4+ 0	0.4994	2.31	V Q
4+ 5	0.5154	2.33	V Q
4+10	0.5315	2.34	V Q
4+15	0.5477	2.35	V Q
4+20	0.5646	2.46	V Q
4+25	0.5829	2.65	V Q
4+30	0.6015	2.70	V Q
4+35	0.6202	2.72	V Q
4+40	0.6390	2.73	V Q
4+45	0.6579	2.74	V Q
4+50	0.6775	2.85	V Q
4+55	0.6985	3.04	V Q

5+ 0	0.7197	3.09	V Q
5+ 5	0.7397	2.90	V Q
5+10	0.7572	2.54	V Q
5+15	0.7740	2.44	VQ
5+20	0.7913	2.51	V Q
5+25	0.8097	2.67	V Q
5+30	0.8283	2.71	V Q
5+35	0.8478	2.83	V Q
5+40	0.8686	3.03	V Q
5+45	0.8899	3.09	V Q
5+50	0.9113	3.11	V Q
5+55	0.9329	3.13	V Q
6+ 0	0.9544	3.13	V Q
6+ 5	0.9768	3.24	V Q
6+10	1.0004	3.43	V Q
6+15	1.0244	3.48	V Q
6+20	1.0485	3.51	V Q
6+25	1.0728	3.52	V Q
6+30	1.0970	3.52	V Q
6+35	1.1221	3.63	V Q
6+40	1.1484	3.82	V Q
6+45	1.1751	3.87	V Q
6+50	1.2019	3.90	V Q
6+55	1.2289	3.91	V Q
7+ 0	1.2558	3.92	V Q
7+ 5	1.2828	3.92	V Q
7+10	1.3099	3.92	VQ
7+15	1.3369	3.92	VQ
7+20	1.3646	4.03	V Q
7+25	1.3936	4.22	V Q
7+30	1.4230	4.27	V Q
7+35	1.4533	4.39	V Q
7+40	1.4849	4.60	V Q
7+45	1.5170	4.65	V Q
7+50	1.5500	4.79	V Q
7+55	1.5843	4.99	V Q
8+ 0	1.6191	5.05	V Q
8+ 5	1.6555	5.28	V Q
8+10	1.6946	5.68	V Q
8+15	1.7344	5.78	V Q
8+20	1.7746	5.83	V Q
8+25	1.8149	5.86	V Q
8+30	1.8554	5.87	V Q
8+35	1.8966	5.99	V Q
8+40	1.9392	6.18	V Q
8+45	1.9821	6.23	V Q
8+50	2.0258	6.36	V Q
8+55	2.0710	6.56	V Q
9+ 0	2.1166	6.62	V Q
9+ 5	2.1638	6.85	V Q
9+10	2.2137	7.25	V Q
9+15	2.2643	7.35	V Q
9+20	2.3161	7.53	V Q
9+25	2.3697	7.78	V Q
9+30	2.4238	7.86	V Q
9+35	2.4792	8.05	V Q
9+40	2.5366	8.33	V Q
9+45	2.5946	8.42	V Q
9+50	2.6539	8.61	V Q
9+55	2.7152	8.90	V Q
10+ 0	2.7771	8.99	V Q
10+ 5	2.8334	8.18	V Q
10+10	2.8792	6.65	Q
10+15	2.9223	6.25	QV
10+20	2.9642	6.08	QV
10+25	3.0053	5.97	Q V
10+30	3.0461	5.92	Q V
10+35	3.0907	6.47	Q V
10+40	3.1427	7.55	VQ
10+45	3.1967	7.85	VQ
10+50	3.2517	7.99	Q
10+55	3.3073	8.07	VQ
11+ 0	3.3632	8.12	VQ
11+ 5	3.4184	8.01	VQ
11+10	3.4719	7.77	QV
11+15	3.5250	7.71	QV
11+20	3.5780	7.69	QV
11+25	3.6310	7.69	QV
11+30	3.6840	7.69	Q V
11+35	3.7351	7.42	Q V
11+40	3.7827	6.92	Q V
11+45	3.8295	6.79	Q V
11+50	3.8769	6.88	Q V
11+55	3.9259	7.11	Q V
12+ 0	3.9753	7.18	Q V
12+ 5	4.0317	8.20	Q V
12+10	4.1008	10.02	V Q
12+15	4.1733	10.52	V Q
12+20	4.2483	10.90	V Q
12+25	4.3260	11.28	V Q
12+30	4.4047	11.43	V Q
12+35	4.4860	11.80	V Q
12+40	4.5710	12.34	V Q
12+45	4.6570	12.50	V Q
12+50	4.7446	12.72	V Q
12+55	4.8342	13.02	V Q
13+ 0	4.9246	13.12	V Q

13+ 5	5.0202	13.88	
13+10	5.1248	15.19	
13+15	5.2319	15.55	
13+20	5.3402	15.72	
13+25	5.4491	15.82	
13+30	5.5585	15.88	
13+35	5.6574	14.36	
13+40	5.7368	11.54	
13+45	5.8112	10.80	
13+50	5.8834	10.48	
13+55	5.9543	10.30	
14+ 0	6.0246	10.21	
14+ 5	6.0984	10.72	
14+10	6.1794	11.76	
14+15	6.2623	12.04	
14+20	6.3452	12.03	
14+25	6.4268	11.85	
14+30	6.5083	11.83	
14+35	6.5898	11.84	
14+40	6.6712	11.83	
14+45	6.7527	11.83	
14+50	6.8332	11.69	
14+55	6.9120	11.44	
15+ 0	6.9905	11.39	
15+ 5	7.0678	11.22	
15+10	7.1432	10.96	
15+15	7.2182	10.89	
15+20	7.2921	10.72	
15+25	7.3641	10.46	
15+30	7.4357	10.39	
15+35	7.5032	9.80	
15+40	7.5635	8.76	
15+45	7.6220	8.49	
15+50	7.6796	8.37	
15+55	7.7368	8.31	
16+ 0	7.7939	8.28	
16+ 5	7.8385	6.47	
16+10	7.8607	3.23	
16+15	7.8770	2.37	
16+20	7.8906	1.98	
16+25	7.9027	1.76	
16+30	7.9140	1.64	
16+35	7.9241	1.46	
16+40	7.9329	1.27	
16+45	7.9413	1.22	
16+50	7.9496	1.20	
16+55	7.9578	1.19	
17+ 0	7.9659	1.18	
17+ 5	7.9755	1.39	
17+10	7.9876	1.77	
17+15	8.0005	1.87	
17+20	8.0137	1.91	
17+25	8.0270	1.94	
17+30	8.0404	1.95	
17+35	8.0539	1.96	
17+40	8.0675	1.96	
17+45	8.0810	1.96	
17+50	8.0937	1.86	
17+55	8.1052	1.67	
18+ 0	8.1163	1.62	
18+ 5	8.1273	1.59	
18+10	8.1382	1.58	
18+15	8.1490	1.57	
18+20	8.1598	1.57	
18+25	8.1706	1.57	
18+30	8.1814	1.57	
18+35	8.1915	1.46	
18+40	8.2003	1.27	
18+45	8.2087	1.22	
18+50	8.2162	1.10	
18+55	8.2224	0.89	
19+ 0	8.2281	0.84	
19+ 5	8.2344	0.91	
19+10	8.2419	1.09	
19+15	8.2498	1.13	
19+20	8.2584	1.26	
19+25	8.2685	1.46	
19+30	8.2789	1.52	
19+35	8.2888	1.44	
19+40	8.2975	1.26	
19+45	8.3059	1.22	
19+50	8.3135	1.10	
19+55	8.3196	0.89	
20+ 0	8.3254	0.84	
20+ 5	8.3317	0.91	
20+10	8.3392	1.09	
20+15	8.3470	1.13	
20+20	8.3549	1.15	
20+25	8.3629	1.17	
20+30	8.3710	1.17	
20+35	8.3791	1.18	
20+40	8.3872	1.18	
20+45	8.3953	1.18	
20+50	8.4027	1.07	
20+55	8.4088	0.88	
21+ 0	8.4145	0.83	
21+ 5	8.4208	0.91	

21+10	8.4283	1.09	Q				V
21+15	8.4361	1.13	Q				V
21+20	8.4433	1.05	Q				V
21+25	8.4493	0.87	Q				V
21+30	8.4550	0.83	Q				V
21+35	8.4613	0.91	Q				V
21+40	8.4688	1.09	Q				V
21+45	8.4766	1.13	Q				V
21+50	8.4838	1.05	Q				V
21+55	8.4898	0.87	Q				V
22+ 0	8.4955	0.83	Q				V
22+ 5	8.5018	0.91	Q				V
22+10	8.5093	1.09	Q				V
22+15	8.5171	1.13	Q				V
22+20	8.5244	1.05	Q				V
22+25	8.5303	0.87	Q				V
22+30	8.5360	0.83	Q				V
22+35	8.5416	0.81	Q				V
22+40	8.5471	0.80	Q				V
22+45	8.5525	0.79	Q				V
22+50	8.5579	0.78	Q				V
22+55	8.5633	0.78	Q				V
23+ 0	8.5687	0.78	Q				V
23+ 5	8.5741	0.78	Q				V
23+10	8.5795	0.78	Q				V
23+15	8.5849	0.78	Q				V
23+20	8.5903	0.78	Q				V
23+25	8.5957	0.78	Q				V
23+30	8.6011	0.78	Q				V
23+35	8.6065	0.78	Q				V
23+40	8.6119	0.78	Q				V
23+45	8.6173	0.78	Q				V
23+50	8.6227	0.78	Q				V
23+55	8.6281	0.78	Q				V
24+ 0	8.6335	0.78	Q				V
24+ 5	8.6375	0.57	Q				V
24+10	8.6388	0.19	Q				V
24+15	8.6395	0.09	Q				V
24+20	8.6398	0.05	Q				V
24+25	8.6400	0.02	Q				V
24+30	8.6400	0.01	Q				V

100-YEAR BASIN ROUTING

Jurupa Valley Commerce Park
Basin Rating Curve

Basin A

Elevation (ft)	Depth (ft)	Area (sq-ft)	Storage (cu-ft)	Storage (ac-ft)	Type Hole C 0.60 Number 4 Diameter (in) 3.00 Invert (ft) 881.75 Discharge (cfs)	Type Riser C 0.60 Number 1 Diameter (in) 24.00 Top (ft) 882.75 Discharge (cfs)	Total Discharge (cfs)
880.00	0.00	44,014	0	0.00	0.00	0.00	0.00
881.00	1.00	51,556	47,785	1.10	0.00	0.00	0.00
881.75	1.75	57,969	89,235	2.05	0.00	0.00	0.00
882.00	2.00	60,116	103,621	2.38	0.47	0.00	0.47
882.75	2.75	66,582	151,511	3.48	0.95	0.00	0.95
883.00	3.00	68,746	168,052	3.86	1.06	7.56	8.62
884.00	4.00	77,447	241,149	5.54	1.42	16.91	18.33
885.00	5.00	86,222	322,983	7.41	1.70	22.69	24.39
885.50	5.50	90,636	367,198	8.43	1.83	25.08	26.92

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/23/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
MITIGATION ANALYSIS - 100-YEAR
1-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 2219PBAC1100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 16
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 99.327 (CFS)
Total volume = 3.508 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 16
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	1.100	0.000	1.100	1.100
1.750	2.050	0.000	2.050	2.050
2.000	2.380	0.470	2.378	2.382
2.750	3.480	0.950	3.477	3.483
3.000	3.860	8.620	3.830	3.890
4.000	5.540	18.330	5.477	5.603
5.000	7.410	24.390	7.326	7.494
5.500	8.430	26.920	8.337	8.523

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 24.8 49.66 74.50 99.33	Depth (Ft.)
0.083	7.59	0.00	0.026	O I	0.02
0.167	17.31	0.00	0.112	O I	0.10
0.250	20.20	0.00	0.241	O I	0.22
0.333	21.85	0.00	0.386	O I	0.35
0.417	24.56	0.00	0.546	O I	0.50
0.500	28.23	0.00	0.727	O I	0.66
0.583	32.35	0.00	0.936	O I	0.85
0.667	38.84	0.00	1.181	O I	1.06
0.750	52.58	0.00	1.496	O I	1.31
0.833	99.33	0.00	2.019	O I	1.73
0.917	94.08	0.60	2.683	O I	2.21
1.000	43.23	0.81	3.151	O I	2.53
1.083	20.68	0.90	3.365	O I	2.67
1.167	6.57	0.94	3.453	O I	2.73
1.250	1.54	0.95	3.474	O	2.75
1.333	0.42	0.95	3.474	O	2.75
1.417	0.00	0.95	3.469	O	2.74
1.500	0.00	0.94	3.463	O	2.74
1.583	0.00	0.94	3.456	O	2.73
1.667	0.00	0.94	3.450	O	2.73
1.750	0.00	0.93	3.443	O	2.73
1.833	0.00	0.93	3.437	O	2.72
1.917	0.00	0.93	3.431	O	2.72
2.000	0.00	0.93	3.424	O	2.71
2.083	0.00	0.92	3.418	O	2.71
2.167	0.00	0.92	3.411	O	2.70

2.250	0.00	0.92	3.405	O				2.70
2.333	0.00	0.91	3.399	O				2.69
2.417	0.00	0.91	3.393	O				2.69
2.500	0.00	0.91	3.386	O				2.69
2.583	0.00	0.91	3.380	O				2.68
2.667	0.00	0.90	3.374	O				2.68
2.750	0.00	0.90	3.368	O				2.67
2.833	0.00	0.90	3.361	O				2.67
2.917	0.00	0.90	3.355	O				2.66
3.000	0.00	0.89	3.349	O				2.66
3.083	0.00	0.89	3.343	O				2.66
3.167	0.00	0.89	3.337	O				2.65
3.250	0.00	0.88	3.331	O				2.65
3.333	0.00	0.88	3.325	O				2.64
3.417	0.00	0.88	3.319	O				2.64
3.500	0.00	0.88	3.313	O				2.64
3.583	0.00	0.87	3.306	O				2.63
3.667	0.00	0.87	3.300	O				2.63
3.750	0.00	0.87	3.294	O				2.62
3.833	0.00	0.87	3.288	O				2.62
3.917	0.00	0.86	3.283	O				2.62
4.000	0.00	0.86	3.277	O				2.61
4.083	0.00	0.86	3.271	O				2.61
4.167	0.00	0.86	3.265	O				2.60
4.250	0.00	0.85	3.259	O				2.60
4.333	0.00	0.85	3.253	O				2.60
4.417	0.00	0.85	3.247	O				2.59
4.500	0.00	0.85	3.241	O				2.59
4.583	0.00	0.84	3.236	O				2.58
4.667	0.00	0.84	3.230	O				2.58
4.750	0.00	0.84	3.224	O				2.58
4.833	0.00	0.84	3.218	O				2.57
4.917	0.00	0.83	3.212	O				2.57
5.000	0.00	0.83	3.207	O				2.56
5.083	0.00	0.83	3.201	O				2.56
5.167	0.00	0.83	3.195	O				2.56
5.250	0.00	0.82	3.190	O				2.55
5.333	0.00	0.82	3.184	O				2.55
5.417	0.00	0.82	3.178	O				2.54
5.500	0.00	0.82	3.173	O				2.54
5.583	0.00	0.81	3.167	O				2.54
5.667	0.00	0.81	3.161	O				2.53
5.750	0.00	0.81	3.156	O				2.53
5.833	0.00	0.81	3.150	O				2.53
5.917	0.00	0.80	3.145	O				2.52
6.000	0.00	0.80	3.139	O				2.52
6.083	0.00	0.80	3.134	O				2.51
6.167	0.00	0.80	3.128	O				2.51
6.250	0.00	0.79	3.123	O				2.51
6.333	0.00	0.79	3.117	O				2.50
6.417	0.00	0.79	3.112	O				2.50
6.500	0.00	0.79	3.106	O				2.50
6.583	0.00	0.78	3.101	O				2.49
6.667	0.00	0.78	3.096	O				2.49
6.750	0.00	0.78	3.090	O				2.48
6.833	0.00	0.78	3.085	O				2.48
6.917	0.00	0.78	3.080	O				2.48
7.000	0.00	0.77	3.074	O				2.47
7.083	0.00	0.77	3.069	O				2.47
7.167	0.00	0.77	3.064	O				2.47
7.250	0.00	0.77	3.058	O				2.46
7.333	0.00	0.76	3.053	O				2.46
7.417	0.00	0.76	3.048	O				2.46
7.500	0.00	0.76	3.043	O				2.45
7.583	0.00	0.76	3.037	O				2.45
7.667	0.00	0.75	3.032	O				2.44
7.750	0.00	0.75	3.027	O				2.44
7.833	0.00	0.75	3.022	O				2.44
7.917	0.00	0.75	3.017	O				2.43
8.000	0.00	0.75	3.011	O				2.43
8.083	0.00	0.74	3.006	O				2.43
8.167	0.00	0.74	3.001	O				2.42
8.250	0.00	0.74	2.996	O				2.42
8.333	0.00	0.74	2.991	O				2.42
8.417	0.00	0.73	2.986	O				2.41
8.500	0.00	0.73	2.981	O				2.41
8.583	0.00	0.73	2.976	O				2.41
8.667	0.00	0.73	2.971	O				2.40
8.750	0.00	0.73	2.966	O				2.40
8.833	0.00	0.72	2.961	O				2.40
8.917	0.00	0.72	2.956	O				2.39
9.000	0.00	0.72	2.951	O				2.39
9.083	0.00	0.72	2.946	O				2.39
9.167	0.00	0.71	2.941	O				2.38
9.250	0.00	0.71	2.936	O				2.38
9.333	0.00	0.71	2.931	O				2.38
9.417	0.00	0.71	2.926	O				2.37
9.500	0.00	0.71	2.922	O				2.37
9.583	0.00	0.70	2.917	O				2.37
9.667	0.00	0.70	2.912	O				2.36
9.750	0.00	0.70	2.907	O				2.36
9.833	0.00	0.70	2.902	O				2.36
9.917	0.00	0.70	2.897	O				2.35
10.000	0.00	0.69	2.893	O				2.35
10.083	0.00	0.69	2.888	O				2.35
10.167	0.00	0.69	2.883	O				2.34
10.250	0.00	0.69	2.878	O				2.34
10.333	0.00	0.69	2.874	O				2.34
10.417	0.00	0.68	2.869	O				2.33

10.500	0.00	0.68	2.864	O				2.33
10.583	0.00	0.68	2.859	O				2.33
10.667	0.00	0.68	2.855	O				2.32
10.750	0.00	0.68	2.850	O				2.32
10.833	0.00	0.67	2.846	O				2.32
10.917	0.00	0.67	2.841	O				2.31
11.000	0.00	0.67	2.836	O				2.31
11.083	0.00	0.67	2.832	O				2.31
11.167	0.00	0.67	2.827	O				2.30
11.250	0.00	0.66	2.823	O				2.30
11.333	0.00	0.66	2.818	O				2.30
11.417	0.00	0.66	2.813	O				2.30
11.500	0.00	0.66	2.809	O				2.29
11.583	0.00	0.66	2.804	O				2.29
11.667	0.00	0.65	2.800	O				2.29
11.750	0.00	0.65	2.795	O				2.28
11.833	0.00	0.65	2.791	O				2.28
11.917	0.00	0.65	2.786	O				2.28
12.000	0.00	0.65	2.782	O				2.27
12.083	0.00	0.64	2.778	O				2.27
12.167	0.00	0.64	2.773	O				2.27
12.250	0.00	0.64	2.769	O				2.27
12.333	0.00	0.64	2.764	O				2.26
12.417	0.00	0.64	2.760	O				2.26
12.500	0.00	0.63	2.756	O				2.26
12.583	0.00	0.63	2.751	O				2.25
12.667	0.00	0.63	2.747	O				2.25
12.750	0.00	0.63	2.742	O				2.25
12.833	0.00	0.63	2.738	O				2.24
12.917	0.00	0.62	2.734	O				2.24
13.000	0.00	0.62	2.730	O				2.24
13.083	0.00	0.62	2.725	O				2.24
13.167	0.00	0.62	2.721	O				2.23
13.250	0.00	0.62	2.717	O				2.23
13.333	0.00	0.62	2.713	O				2.23
13.417	0.00	0.61	2.708	O				2.22
13.500	0.00	0.61	2.704	O				2.22
13.583	0.00	0.61	2.700	O				2.22
13.667	0.00	0.61	2.696	O				2.22
13.750	0.00	0.61	2.692	O				2.21
13.833	0.00	0.60	2.687	O				2.21
13.917	0.00	0.60	2.683	O				2.21
14.000	0.00	0.60	2.679	O				2.20
14.083	0.00	0.60	2.675	O				2.20
14.167	0.00	0.60	2.671	O				2.20
14.250	0.00	0.60	2.667	O				2.20
14.333	0.00	0.59	2.663	O				2.19
14.417	0.00	0.59	2.659	O				2.19
14.500	0.00	0.59	2.654	O				2.19
14.583	0.00	0.59	2.650	O				2.18
14.667	0.00	0.59	2.646	O				2.18
14.750	0.00	0.58	2.642	O				2.18
14.833	0.00	0.58	2.638	O				2.18
14.917	0.00	0.58	2.634	O				2.17
15.000	0.00	0.58	2.630	O				2.17
15.083	0.00	0.58	2.626	O				2.17
15.167	0.00	0.58	2.622	O				2.17
15.250	0.00	0.57	2.618	O				2.16
15.333	0.00	0.57	2.614	O				2.16
15.417	0.00	0.57	2.610	O				2.16
15.500	0.00	0.57	2.607	O				2.15
15.583	0.00	0.57	2.603	O				2.15
15.667	0.00	0.57	2.599	O				2.15
15.750	0.00	0.56	2.595	O				2.15
15.833	0.00	0.56	2.591	O				2.14
15.917	0.00	0.56	2.587	O				2.14
16.000	0.00	0.56	2.583	O				2.14
16.083	0.00	0.56	2.579	O				2.14
16.167	0.00	0.56	2.576	O				2.13
16.250	0.00	0.55	2.572	O				2.13
16.333	0.00	0.55	2.568	O				2.13
16.417	0.00	0.55	2.564	O				2.13
16.500	0.00	0.55	2.560	O				2.12
16.583	0.00	0.55	2.557	O				2.12
16.667	0.00	0.55	2.553	O				2.12
16.750	0.00	0.54	2.549	O				2.12
16.833	0.00	0.54	2.545	O				2.11
16.917	0.00	0.54	2.542	O				2.11
17.000	0.00	0.54	2.538	O				2.11
17.083	0.00	0.54	2.534	O				2.11
17.167	0.00	0.54	2.531	O				2.10
17.250	0.00	0.53	2.527	O				2.10
17.333	0.00	0.53	2.523	O				2.10
17.417	0.00	0.53	2.520	O				2.10
17.500	0.00	0.53	2.516	O				2.09
17.583	0.00	0.53	2.512	O				2.09
17.667	0.00	0.53	2.509	O				2.09
17.750	0.00	0.52	2.505	O				2.09
17.833	0.00	0.52	2.501	O				2.08
17.917	0.00	0.52	2.498	O				2.08
18.000	0.00	0.52	2.494	O				2.08
18.083	0.00	0.52	2.491	O				2.08
18.167	0.00	0.52	2.487	O				2.07
18.250	0.00	0.52	2.483	O				2.07
18.333	0.00	0.51	2.480	O				2.07
18.417	0.00	0.51	2.476	O				2.07
18.500	0.00	0.51	2.473	O				2.06
18.583	0.00	0.51	2.469	O				2.06
18.667	0.00	0.51	2.466	O				2.06

18.750	0.00	0.51	2.462	O				2.06
18.833	0.00	0.50	2.459	O				2.05
18.917	0.00	0.50	2.455	O				2.05
19.000	0.00	0.50	2.452	O				2.05
19.083	0.00	0.50	2.449	O				2.05
19.167	0.00	0.50	2.445	O				2.04
19.250	0.00	0.50	2.442	O				2.04
19.333	0.00	0.50	2.438	O				2.04
19.417	0.00	0.49	2.435	O				2.04
19.500	0.00	0.49	2.431	O				2.04
19.583	0.00	0.49	2.428	O				2.03
19.667	0.00	0.49	2.425	O				2.03
19.750	0.00	0.49	2.421	O				2.03
19.833	0.00	0.49	2.418	O				2.03
19.917	0.00	0.49	2.415	O				2.02
20.000	0.00	0.48	2.411	O				2.02
20.083	0.00	0.48	2.408	O				2.02
20.167	0.00	0.48	2.405	O				2.02
20.250	0.00	0.48	2.401	O				2.01
20.333	0.00	0.48	2.398	O				2.01
20.417	0.00	0.48	2.395	O				2.01
20.500	0.00	0.48	2.391	O				2.01
20.583	0.00	0.47	2.388	O				2.01
20.667	0.00	0.47	2.385	O				2.00
20.750	0.00	0.47	2.382	O				2.00
20.833	0.00	0.47	2.378	O				2.00
20.917	0.00	0.46	2.375	O				2.00
21.000	0.00	0.46	2.372	O				1.99
21.083	0.00	0.45	2.369	O				1.99
21.167	0.00	0.45	2.366	O				1.99
21.250	0.00	0.45	2.363	O				1.99
21.333	0.00	0.44	2.360	O				1.98
21.417	0.00	0.44	2.357	O				1.98
21.500	0.00	0.43	2.354	O				1.98
21.583	0.00	0.43	2.351	O				1.98
21.667	0.00	0.42	2.348	O				1.98
21.750	0.00	0.42	2.345	O				1.97
21.833	0.00	0.42	2.342	O				1.97
21.917	0.00	0.41	2.339	O				1.97
22.000	0.00	0.41	2.336	O				1.97
22.083	0.00	0.40	2.334	O				1.96
22.167	0.00	0.40	2.331	O				1.96
22.250	0.00	0.40	2.328	O				1.96
22.333	0.00	0.39	2.325	O				1.96
22.417	0.00	0.39	2.323	O				1.96
22.500	0.00	0.38	2.320	O				1.95
22.583	0.00	0.38	2.317	O				1.95
22.667	0.00	0.38	2.315	O				1.95
22.750	0.00	0.37	2.312	O				1.95
22.833	0.00	0.37	2.310	O				1.95
22.917	0.00	0.37	2.307	O				1.94
23.000	0.00	0.36	2.305	O				1.94
23.083	0.00	0.36	2.302	O				1.94
23.167	0.00	0.36	2.300	O				1.94
23.250	0.00	0.35	2.297	O				1.94
23.333	0.00	0.35	2.295	O				1.94
23.417	0.00	0.35	2.292	O				1.93
23.500	0.00	0.34	2.290	O				1.93
23.583	0.00	0.34	2.288	O				1.93
23.667	0.00	0.34	2.285	O				1.93
23.750	0.00	0.33	2.283	O				1.93
23.833	0.00	0.33	2.281	O				1.92
23.917	0.00	0.33	2.279	O				1.92
24.000	0.00	0.32	2.276	O				1.92
24.083	0.00	0.32	2.274	O				1.92
24.167	0.00	0.32	2.272	O				1.92
24.250	0.00	0.31	2.270	O				1.92
24.333	0.00	0.31	2.268	O				1.91
24.417	0.00	0.31	2.265	O				1.91
24.500	0.00	0.30	2.263	O				1.91
24.583	0.00	0.30	2.261	O				1.91
24.667	0.00	0.30	2.259	O				1.91
24.750	0.00	0.30	2.257	O				1.91
24.833	0.00	0.29	2.255	O				1.91
24.917	0.00	0.29	2.253	O				1.90
25.000	0.00	0.29	2.251	O				1.90
25.083	0.00	0.28	2.249	O				1.90
25.167	0.00	0.28	2.247	O				1.90
25.250	0.00	0.28	2.245	O				1.90
25.333	0.00	0.28	2.243	O				1.90
25.417	0.00	0.27	2.242	O				1.90
25.500	0.00	0.27	2.240	O				1.89
25.583	0.00	0.27	2.238	O				1.89
25.667	0.00	0.26	2.236	O				1.89
25.750	0.00	0.26	2.234	O				1.89
25.833	0.00	0.26	2.232	O				1.89
25.917	0.00	0.26	2.231	O				1.89
26.000	0.00	0.25	2.229	O				1.89
26.083	0.00	0.25	2.227	O				1.88
26.167	0.00	0.25	2.225	O				1.88
26.250	0.00	0.25	2.224	O				1.88
26.333	0.00	0.24	2.222	O				1.88
26.417	0.00	0.24	2.220	O				1.88
26.500	0.00	0.24	2.219	O				1.88
26.583	0.00	0.24	2.217	O				1.88
26.667	0.00	0.24	2.215	O				1.88
26.750	0.00	0.23	2.214	O				1.87
26.833	0.00	0.23	2.212	O				1.87
26.917	0.00	0.23	2.211	O				1.87

27.000	0.00	0.23	2.209	O				1.87
27.083	0.00	0.22	2.207	O				1.87
27.167	0.00	0.22	2.206	O				1.87
27.250	0.00	0.22	2.204	O				1.87
27.333	0.00	0.22	2.203	O				1.87
27.417	0.00	0.22	2.201	O				1.86
27.500	0.00	0.21	2.200	O				1.86
27.583	0.00	0.21	2.198	O				1.86
27.667	0.00	0.21	2.197	O				1.86
27.750	0.00	0.21	2.196	O				1.86
27.833	0.00	0.21	2.194	O				1.86
27.917	0.00	0.20	2.193	O				1.86
28.000	0.00	0.20	2.191	O				1.86
28.083	0.00	0.20	2.190	O				1.86
28.167	0.00	0.20	2.189	O				1.85
28.250	0.00	0.20	2.187	O				1.85
28.333	0.00	0.19	2.186	O				1.85
28.417	0.00	0.19	2.185	O				1.85
28.500	0.00	0.19	2.183	O				1.85
28.583	0.00	0.19	2.182	O				1.85
28.667	0.00	0.19	2.181	O				1.85
28.750	0.00	0.18	2.179	O				1.85
28.833	0.00	0.18	2.178	O				1.85
28.917	0.00	0.18	2.177	O				1.85
29.000	0.00	0.18	2.176	O				1.85
29.083	0.00	0.18	2.174	O				1.84
29.167	0.00	0.18	2.173	O				1.84
29.250	0.00	0.17	2.172	O				1.84
29.333	0.00	0.17	2.171	O				1.84
29.417	0.00	0.17	2.170	O				1.84
29.500	0.00	0.17	2.168	O				1.84
29.583	0.00	0.17	2.167	O				1.84
29.667	0.00	0.17	2.166	O				1.84
29.750	0.00	0.16	2.165	O				1.84
29.833	0.00	0.16	2.164	O				1.84
29.917	0.00	0.16	2.163	O				1.84
30.000	0.00	0.16	2.162	O				1.83
30.083	0.00	0.16	2.161	O				1.83
30.167	0.00	0.16	2.159	O				1.83
30.250	0.00	0.15	2.158	O				1.83
30.333	0.00	0.15	2.157	O				1.83
30.417	0.00	0.15	2.156	O				1.83
30.500	0.00	0.15	2.155	O				1.83
30.583	0.00	0.15	2.154	O				1.83
30.667	0.00	0.15	2.153	O				1.83
30.750	0.00	0.15	2.152	O				1.83
30.833	0.00	0.14	2.151	O				1.83
30.917	0.00	0.14	2.150	O				1.83
31.000	0.00	0.14	2.149	O				1.83
31.083	0.00	0.14	2.148	O				1.82
31.167	0.00	0.14	2.147	O				1.82
31.250	0.00	0.14	2.146	O				1.82
31.333	0.00	0.14	2.145	O				1.82
31.417	0.00	0.13	2.145	O				1.82
31.500	0.00	0.13	2.144	O				1.82
31.583	0.00	0.13	2.143	O				1.82
31.667	0.00	0.13	2.142	O				1.82
31.750	0.00	0.13	2.141	O				1.82
31.833	0.00	0.13	2.140	O				1.82
31.917	0.00	0.13	2.139	O				1.82
32.000	0.00	0.13	2.138	O				1.82
32.083	0.00	0.12	2.137	O				1.82
32.167	0.00	0.12	2.137	O				1.82
32.250	0.00	0.12	2.136	O				1.81
32.333	0.00	0.12	2.135	O				1.81
32.417	0.00	0.12	2.134	O				1.81
32.500	0.00	0.12	2.133	O				1.81
32.583	0.00	0.12	2.132	O				1.81
32.667	0.00	0.12	2.132	O				1.81
32.750	0.00	0.12	2.131	O				1.81
32.833	0.00	0.11	2.130	O				1.81
32.917	0.00	0.11	2.129	O				1.81
33.000	0.00	0.11	2.128	O				1.81
33.083	0.00	0.11	2.128	O				1.81
33.167	0.00	0.11	2.127	O				1.81
33.250	0.00	0.11	2.126	O				1.81
33.333	0.00	0.11	2.125	O				1.81
33.417	0.00	0.11	2.125	O				1.81
33.500	0.00	0.11	2.124	O				1.81
33.583	0.00	0.10	2.123	O				1.81
33.667	0.00	0.10	2.123	O				1.80
33.750	0.00	0.10	2.122	O				1.80
33.833	0.00	0.10	2.121	O				1.80
33.917	0.00	0.10	2.120	O				1.80
34.000	0.00	0.10	2.120	O				1.80
34.083	0.00	0.10	2.119	O				1.80
34.167	0.00	0.10	2.118	O				1.80
34.250	0.00	0.10	2.118	O				1.80
34.333	0.00	0.10	2.117	O				1.80
34.417	0.00	0.09	2.116	O				1.80
34.500	0.00	0.09	2.116	O				1.80
34.583	0.00	0.09	2.115	O				1.80
34.667	0.00	0.09	2.114	O				1.80
34.750	0.00	0.09	2.114	O				1.80
34.833	0.00	0.09	2.113	O				1.80
34.917	0.00	0.09	2.113	O				1.80
35.000	0.00	0.09	2.112	O				1.80
35.083	0.00	0.09	2.111	O				1.80
35.167	0.00	0.09	2.111	O				1.80

35.250	0.00	0.09	2.110	O				1.80
35.333	0.00	0.08	2.110	O				1.80
35.417	0.00	0.08	2.109	O				1.79
35.500	0.00	0.08	2.108	O				1.79
35.583	0.00	0.08	2.108	O				1.79
35.667	0.00	0.08	2.107	O				1.79
35.750	0.00	0.08	2.107	O				1.79
35.833	0.00	0.08	2.106	O				1.79
35.917	0.00	0.08	2.106	O				1.79
36.000	0.00	0.08	2.105	O				1.79
36.083	0.00	0.08	2.105	O				1.79
36.167	0.00	0.08	2.104	O				1.79
36.250	0.00	0.08	2.104	O				1.79
36.333	0.00	0.08	2.103	O				1.79
36.417	0.00	0.07	2.102	O				1.79
36.500	0.00	0.07	2.102	O				1.79
36.583	0.00	0.07	2.101	O				1.79
36.667	0.00	0.07	2.101	O				1.79
36.750	0.00	0.07	2.100	O				1.79
36.833	0.00	0.07	2.100	O				1.79
36.917	0.00	0.07	2.099	O				1.79
37.000	0.00	0.07	2.099	O				1.79
37.083	0.00	0.07	2.099	O				1.79
37.167	0.00	0.07	2.098	O				1.79
37.250	0.00	0.07	2.098	O				1.79
37.333	0.00	0.07	2.097	O				1.79
37.417	0.00	0.07	2.097	O				1.79
37.500	0.00	0.07	2.096	O				1.78
37.583	0.00	0.07	2.096	O				1.78
37.667	0.00	0.06	2.095	O				1.78
37.750	0.00	0.06	2.095	O				1.78
37.833	0.00	0.06	2.094	O				1.78
37.917	0.00	0.06	2.094	O				1.78
38.000	0.00	0.06	2.094	O				1.78
38.083	0.00	0.06	2.093	O				1.78
38.167	0.00	0.06	2.093	O				1.78
38.250	0.00	0.06	2.092	O				1.78
38.333	0.00	0.06	2.092	O				1.78
38.417	0.00	0.06	2.091	O				1.78
38.500	0.00	0.06	2.091	O				1.78
38.583	0.00	0.06	2.091	O				1.78
38.667	0.00	0.06	2.090	O				1.78
38.750	0.00	0.06	2.090	O				1.78
38.833	0.00	0.06	2.089	O				1.78
38.917	0.00	0.06	2.089	O				1.78
39.000	0.00	0.06	2.089	O				1.78
39.083	0.00	0.05	2.088	O				1.78
39.167	0.00	0.05	2.088	O				1.78
39.250	0.00	0.05	2.088	O				1.78
39.333	0.00	0.05	2.087	O				1.78
39.417	0.00	0.05	2.087	O				1.78
39.500	0.00	0.05	2.086	O				1.78
39.583	0.00	0.05	2.086	O				1.78
39.667	0.00	0.05	2.086	O				1.78
39.750	0.00	0.05	2.085	O				1.78
39.833	0.00	0.05	2.085	O				1.78
39.917	0.00	0.05	2.085	O				1.78
40.000	0.00	0.05	2.084	O				1.78
40.083	0.00	0.05	2.084	O				1.78
40.167	0.00	0.05	2.084	O				1.78
40.250	0.00	0.05	2.083	O				1.78
40.333	0.00	0.05	2.083	O				1.78
40.417	0.00	0.05	2.083	O				1.77
40.500	0.00	0.05	2.082	O				1.77
40.583	0.00	0.05	2.082	O				1.77
40.667	0.00	0.05	2.082	O				1.77
40.750	0.00	0.04	2.082	O				1.77
40.833	0.00	0.04	2.081	O				1.77
40.917	0.00	0.04	2.081	O				1.77
41.000	0.00	0.04	2.081	O				1.77
41.083	0.00	0.04	2.080	O				1.77
41.167	0.00	0.04	2.080	O				1.77
41.250	0.00	0.04	2.080	O				1.77
41.333	0.00	0.04	2.079	O				1.77
41.417	0.00	0.04	2.079	O				1.77
41.500	0.00	0.04	2.079	O				1.77
41.583	0.00	0.04	2.079	O				1.77
41.667	0.00	0.04	2.078	O				1.77
41.750	0.00	0.04	2.078	O				1.77
41.833	0.00	0.04	2.078	O				1.77
41.917	0.00	0.04	2.077	O				1.77
42.000	0.00	0.04	2.077	O				1.77
42.083	0.00	0.04	2.077	O				1.77
42.167	0.00	0.04	2.077	O				1.77
42.250	0.00	0.04	2.076	O				1.77
42.333	0.00	0.04	2.076	O				1.77
42.417	0.00	0.04	2.076	O				1.77
42.500	0.00	0.04	2.076	O				1.77
42.583	0.00	0.04	2.075	O				1.77
42.667	0.00	0.04	2.075	O				1.77
42.750	0.00	0.04	2.075	O				1.77
42.833	0.00	0.04	2.075	O				1.77
42.917	0.00	0.03	2.074	O				1.77
43.000	0.00	0.03	2.074	O				1.77
43.083	0.00	0.03	2.074	O				1.77
43.167	0.00	0.03	2.074	O				1.77
43.250	0.00	0.03	2.073	O				1.77
43.333	0.00	0.03	2.073	O				1.77
43.417	0.00	0.03	2.073	O				1.77

43.500	0.00	0.03	2.073	O				1.77
43.583	0.00	0.03	2.073	O				1.77
43.667	0.00	0.03	2.072	O				1.77
43.750	0.00	0.03	2.072	O				1.77
43.833	0.00	0.03	2.072	O				1.77
43.917	0.00	0.03	2.072	O				1.77
44.000	0.00	0.03	2.071	O				1.77
44.083	0.00	0.03	2.071	O				1.77
44.167	0.00	0.03	2.071	O				1.77
44.250	0.00	0.03	2.071	O				1.77
44.333	0.00	0.03	2.071	O				1.77
44.417	0.00	0.03	2.070	O				1.77
44.500	0.00	0.03	2.070	O				1.77
44.583	0.00	0.03	2.070	O				1.77
44.667	0.00	0.03	2.070	O				1.77
44.750	0.00	0.03	2.070	O				1.76
44.833	0.00	0.03	2.069	O				1.76
44.917	0.00	0.03	2.069	O				1.76
45.000	0.00	0.03	2.069	O				1.76
45.083	0.00	0.03	2.069	O				1.76
45.167	0.00	0.03	2.069	O				1.76
45.250	0.00	0.03	2.069	O				1.76
45.333	0.00	0.03	2.068	O				1.76
45.417	0.00	0.03	2.068	O				1.76
45.500	0.00	0.03	2.068	O				1.76
45.583	0.00	0.03	2.068	O				1.76
45.667	0.00	0.03	2.068	O				1.76
45.750	0.00	0.02	2.067	O				1.76
45.833	0.00	0.02	2.067	O				1.76
45.917	0.00	0.02	2.067	O				1.76
46.000	0.00	0.02	2.067	O				1.76
46.083	0.00	0.02	2.067	O				1.76
46.167	0.00	0.02	2.067	O				1.76
46.250	0.00	0.02	2.066	O				1.76
46.333	0.00	0.02	2.066	O				1.76
46.417	0.00	0.02	2.066	O				1.76
46.500	0.00	0.02	2.066	O				1.76
46.583	0.00	0.02	2.066	O				1.76
46.667	0.00	0.02	2.066	O				1.76
46.750	0.00	0.02	2.066	O				1.76
46.833	0.00	0.02	2.065	O				1.76
46.917	0.00	0.02	2.065	O				1.76
47.000	0.00	0.02	2.065	O				1.76
47.083	0.00	0.02	2.065	O				1.76
47.167	0.00	0.02	2.065	O				1.76
47.250	0.00	0.02	2.065	O				1.76
47.333	0.00	0.02	2.065	O				1.76
47.417	0.00	0.02	2.064	O				1.76
47.500	0.00	0.02	2.064	O				1.76
47.583	0.00	0.02	2.064	O				1.76
47.667	0.00	0.02	2.064	O				1.76
47.750	0.00	0.02	2.064	O				1.76
47.833	0.00	0.02	2.064	O				1.76
47.917	0.00	0.02	2.064	O				1.76
48.000	0.00	0.02	2.063	O				1.76
48.083	0.00	0.02	2.063	O				1.76
48.167	0.00	0.02	2.063	O				1.76
48.250	0.00	0.02	2.063	O				1.76
48.333	0.00	0.02	2.063	O				1.76
48.417	0.00	0.02	2.063	O				1.76
48.500	0.00	0.02	2.063	O				1.76
48.583	0.00	0.02	2.063	O				1.76
48.667	0.00	0.02	2.062	O				1.76
48.750	0.00	0.02	2.062	O				1.76
48.833	0.00	0.02	2.062	O				1.76
48.917	0.00	0.02	2.062	O				1.76
49.000	0.00	0.02	2.062	O				1.76
49.083	0.00	0.02	2.062	O				1.76
49.167	0.00	0.02	2.062	O				1.76
49.250	0.00	0.02	2.062	O				1.76
49.333	0.00	0.02	2.061	O				1.76
49.417	0.00	0.02	2.061	O				1.76
49.500	0.00	0.02	2.061	O				1.76
49.583	0.00	0.02	2.061	O				1.76
49.667	0.00	0.02	2.061	O				1.76
49.750	0.00	0.02	2.061	O				1.76
49.833	0.00	0.02	2.061	O				1.76
49.917	0.00	0.02	2.061	O				1.76
50.000	0.00	0.02	2.061	O				1.76
50.083	0.00	0.01	2.061	O				1.76
50.167	0.00	0.01	2.060	O				1.76
50.250	0.00	0.01	2.060	O				1.76
50.333	0.00	0.01	2.060	O				1.76
50.417	0.00	0.01	2.060	O				1.76
50.500	0.00	0.01	2.060	O				1.76
50.583	0.00	0.01	2.060	O				1.76
50.667	0.00	0.01	2.060	O				1.76
50.750	0.00	0.01	2.060	O				1.76
50.833	0.00	0.01	2.060	O				1.76
50.917	0.00	0.01	2.060	O				1.76
51.000	0.00	0.01	2.059	O				1.76
51.083	0.00	0.01	2.059	O				1.76
51.167	0.00	0.01	2.059	O				1.76
51.250	0.00	0.01	2.059	O				1.76
51.333	0.00	0.01	2.059	O				1.76
51.417	0.00	0.01	2.059	O				1.76
51.500	0.00	0.01	2.059	O				1.76
51.583	0.00	0.01	2.059	O				1.76
51.667	0.00	0.01	2.059	O				1.76

51.750	0.00	0.01	2.059	O				1.76
51.833	0.00	0.01	2.059	O				1.76
51.917	0.00	0.01	2.058	O				1.76
52.000	0.00	0.01	2.058	O				1.76
52.083	0.00	0.01	2.058	O				1.76
52.167	0.00	0.01	2.058	O				1.76
52.250	0.00	0.01	2.058	O				1.76
52.333	0.00	0.01	2.058	O				1.76
52.417	0.00	0.01	2.058	O				1.76
52.500	0.00	0.01	2.058	O				1.76
52.583	0.00	0.01	2.058	O				1.76
52.667	0.00	0.01	2.058	O				1.76
52.750	0.00	0.01	2.058	O				1.76
52.833	0.00	0.01	2.058	O				1.76
52.917	0.00	0.01	2.058	O				1.76
53.000	0.00	0.01	2.057	O				1.76
53.083	0.00	0.01	2.057	O				1.76
53.167	0.00	0.01	2.057	O				1.76
53.250	0.00	0.01	2.057	O				1.76
53.333	0.00	0.01	2.057	O				1.76
53.417	0.00	0.01	2.057	O				1.76
53.500	0.00	0.01	2.057	O				1.76
53.583	0.00	0.01	2.057	O				1.76
53.667	0.00	0.01	2.057	O				1.76
53.750	0.00	0.01	2.057	O				1.76
53.833	0.00	0.01	2.057	O				1.76
53.917	0.00	0.01	2.057	O				1.76
54.000	0.00	0.01	2.057	O				1.76
54.083	0.00	0.01	2.057	O				1.75
54.167	0.00	0.01	2.056	O				1.75
54.250	0.00	0.01	2.056	O				1.75
54.333	0.00	0.01	2.056	O				1.75
54.417	0.00	0.01	2.056	O				1.75
54.500	0.00	0.01	2.056	O				1.75
54.583	0.00	0.01	2.056	O				1.75
54.667	0.00	0.01	2.056	O				1.75
54.750	0.00	0.01	2.056	O				1.75
54.833	0.00	0.01	2.056	O				1.75
54.917	0.00	0.01	2.056	O				1.75
55.000	0.00	0.01	2.056	O				1.75
55.083	0.00	0.01	2.056	O				1.75
55.167	0.00	0.01	2.056	O				1.75
55.250	0.00	0.01	2.056	O				1.75
55.333	0.00	0.01	2.056	O				1.75
55.417	0.00	0.01	2.056	O				1.75
55.500	0.00	0.01	2.056	O				1.75
55.583	0.00	0.01	2.055	O				1.75
55.667	0.00	0.01	2.055	O				1.75
55.750	0.00	0.01	2.055	O				1.75
55.833	0.00	0.01	2.055	O				1.75
55.917	0.00	0.01	2.055	O				1.75
56.000	0.00	0.01	2.055	O				1.75
56.083	0.00	0.01	2.055	O				1.75
56.167	0.00	0.01	2.055	O				1.75
56.250	0.00	0.01	2.055	O				1.75
56.333	0.00	0.01	2.055	O				1.75
56.417	0.00	0.01	2.055	O				1.75
56.500	0.00	0.01	2.055	O				1.75
56.583	0.00	0.01	2.055	O				1.75
56.667	0.00	0.01	2.055	O				1.75
56.750	0.00	0.01	2.055	O				1.75
56.833	0.00	0.01	2.055	O				1.75
56.917	0.00	0.01	2.055	O				1.75
57.000	0.00	0.01	2.055	O				1.75
57.083	0.00	0.01	2.055	O				1.75
57.167	0.00	0.01	2.055	O				1.75
57.250	0.00	0.01	2.055	O				1.75
57.333	0.00	0.01	2.054	O				1.75
57.417	0.00	0.01	2.054	O				1.75
57.500	0.00	0.01	2.054	O				1.75
57.583	0.00	0.01	2.054	O				1.75
57.667	0.00	0.01	2.054	O				1.75
57.750	0.00	0.01	2.054	O				1.75
57.833	0.00	0.01	2.054	O				1.75
57.917	0.00	0.01	2.054	O				1.75
58.000	0.00	0.01	2.054	O				1.75
58.083	0.00	0.01	2.054	O				1.75
58.167	0.00	0.01	2.054	O				1.75
58.250	0.00	0.01	2.054	O				1.75
58.333	0.00	0.01	2.054	O				1.75
58.417	0.00	0.01	2.054	O				1.75
58.500	0.00	0.01	2.054	O				1.75
58.583	0.00	0.01	2.054	O				1.75
58.667	0.00	0.01	2.054	O				1.75
58.750	0.00	0.01	2.054	O				1.75
58.833	0.00	0.01	2.054	O				1.75
58.917	0.00	0.01	2.054	O				1.75
59.000	0.00	0.01	2.054	O				1.75
59.083	0.00	0.01	2.054	O				1.75
59.167	0.00	0.01	2.054	O				1.75
59.250	0.00	0.01	2.054	O				1.75
59.333	0.00	0.01	2.054	O				1.75
59.417	0.00	0.00	2.054	O				1.75
59.500	0.00	0.00	2.053	O				1.75
59.583	0.00	0.00	2.053	O				1.75
59.667	0.00	0.00	2.053	O				1.75
59.750	0.00	0.00	2.053	O				1.75
59.833	0.00	0.00	2.053	O				1.75
59.917	0.00	0.00	2.053	O				1.75

60.000	0.00	0.00	2.053	O				1.75
60.083	0.00	0.00	2.053	O				1.75
60.167	0.00	0.00	2.053	O				1.75
60.250	0.00	0.00	2.053	O				1.75
60.333	0.00	0.00	2.053	O				1.75
60.417	0.00	0.00	2.053	O				1.75
60.500	0.00	0.00	2.053	O				1.75
60.583	0.00	0.00	2.053	O				1.75
60.667	0.00	0.00	2.053	O				1.75
60.750	0.00	0.00	2.053	O				1.75
60.833	0.00	0.00	2.053	O				1.75
60.917	0.00	0.00	2.053	O				1.75
61.000	0.00	0.00	2.053	O				1.75
61.083	0.00	0.00	2.053	O				1.75
61.167	0.00	0.00	2.053	O				1.75
61.250	0.00	0.00	2.053	O				1.75
61.333	0.00	0.00	2.053	O				1.75
61.417	0.00	0.00	2.053	O				1.75
61.500	0.00	0.00	2.053	O				1.75
61.583	0.00	0.00	2.053	O				1.75
61.667	0.00	0.00	2.053	O				1.75
61.750	0.00	0.00	2.053	O				1.75
61.833	0.00	0.00	2.053	O				1.75
61.917	0.00	0.00	2.053	O				1.75
62.000	0.00	0.00	2.053	O				1.75
62.083	0.00	0.00	2.053	O				1.75
62.167	0.00	0.00	2.053	O				1.75
62.250	0.00	0.00	2.053	O				1.75
62.333	0.00	0.00	2.052	O				1.75
62.417	0.00	0.00	2.052	O				1.75
62.500	0.00	0.00	2.052	O				1.75
62.583	0.00	0.00	2.052	O				1.75
62.667	0.00	0.00	2.052	O				1.75
62.750	0.00	0.00	2.052	O				1.75
62.833	0.00	0.00	2.052	O				1.75
62.917	0.00	0.00	2.052	O				1.75
63.000	0.00	0.00	2.052	O				1.75
63.083	0.00	0.00	2.052	O				1.75
63.167	0.00	0.00	2.052	O				1.75
63.250	0.00	0.00	2.052	O				1.75
63.333	0.00	0.00	2.052	O				1.75
63.417	0.00	0.00	2.052	O				1.75
63.500	0.00	0.00	2.052	O				1.75
63.583	0.00	0.00	2.052	O				1.75
63.667	0.00	0.00	2.052	O				1.75
63.750	0.00	0.00	2.052	O				1.75
63.833	0.00	0.00	2.052	O				1.75
63.917	0.00	0.00	2.052	O				1.75
64.000	0.00	0.00	2.052	O				1.75
64.083	0.00	0.00	2.052	O				1.75
64.167	0.00	0.00	2.052	O				1.75
64.250	0.00	0.00	2.052	O				1.75
64.333	0.00	0.00	2.052	O				1.75
64.417	0.00	0.00	2.052	O				1.75
64.500	0.00	0.00	2.052	O				1.75
64.583	0.00	0.00	2.052	O				1.75
64.667	0.00	0.00	2.052	O				1.75
64.750	0.00	0.00	2.052	O				1.75
64.833	0.00	0.00	2.052	O				1.75
64.917	0.00	0.00	2.052	O				1.75
65.000	0.00	0.00	2.052	O				1.75
65.083	0.00	0.00	2.052	O				1.75
65.167	0.00	0.00	2.052	O				1.75
65.250	0.00	0.00	2.052	O				1.75
65.333	0.00	0.00	2.052	O				1.75
65.417	0.00	0.00	2.052	O				1.75
65.500	0.00	0.00	2.052	O				1.75
65.583	0.00	0.00	2.052	O				1.75
65.667	0.00	0.00	2.052	O				1.75
65.750	0.00	0.00	2.052	O				1.75
65.833	0.00	0.00	2.052	O				1.75
65.917	0.00	0.00	2.052	O				1.75
66.000	0.00	0.00	2.052	O				1.75
66.083	0.00	0.00	2.052	O				1.75
66.167	0.00	0.00	2.052	O				1.75
66.250	0.00	0.00	2.052	O				1.75
66.333	0.00	0.00	2.052	O				1.75
66.417	0.00	0.00	2.052	O				1.75
66.500	0.00	0.00	2.052	O				1.75
66.583	0.00	0.00	2.052	O				1.75
66.667	0.00	0.00	2.051	O				1.75
66.750	0.00	0.00	2.051	O				1.75
66.833	0.00	0.00	2.051	O				1.75
66.917	0.00	0.00	2.051	O				1.75
67.000	0.00	0.00	2.051	O				1.75
67.083	0.00	0.00	2.051	O				1.75
67.167	0.00	0.00	2.051	O				1.75
67.250	0.00	0.00	2.051	O				1.75
67.333	0.00	0.00	2.051	O				1.75
67.417	0.00	0.00	2.051	O				1.75
67.500	0.00	0.00	2.051	O				1.75
67.583	0.00	0.00	2.051	O				1.75
67.667	0.00	0.00	2.051	O				1.75
67.750	0.00	0.00	2.051	O				1.75
67.833	0.00	0.00	2.051	O				1.75
67.917	0.00	0.00	2.051	O				1.75
68.000	0.00	0.00	2.051	O				1.75
68.083	0.00	0.00	2.051	O				1.75
68.167	0.00	0.00	2.051	O				1.75

68.250	0.00	0.00	2.051	O	|	|	|	|	1.75
68.333	0.00	0.00	2.051	O	|	|	|	|	1.75
68.417	0.00	0.00	2.051	O	|	|	|	|	1.75
68.500	0.00	0.00	2.051	O	|	|	|	|	1.75
68.583	0.00	0.00	2.051	O	|	|	|	|	1.75
68.667	0.00	0.00	2.051	O	|	|	|	|	1.75
68.750	0.00	0.00	2.051	O	|	|	|	|	1.75
68.833	0.00	0.00	2.051	O	|	|	|	|	1.75
68.917	0.00	0.00	2.051	O	|	|	|	|	1.75
69.000	0.00	0.00	2.051	O	|	|	|	|	1.75
69.083	0.00	0.00	2.051	O	|	|	|	|	1.75
69.167	0.00	0.00	2.051	O	|	|	|	|	1.75
69.250	0.00	0.00	2.051	O	|	|	|	|	1.75
69.333	0.00	0.00	2.051	O	|	|	|	|	1.75
69.417	0.00	0.00	2.051	O	|	|	|	|	1.75
69.500	0.00	0.00	2.051	O	|	|	|	|	1.75
69.583	0.00	0.00	2.051	O	|	|	|	|	1.75
69.667	0.00	0.00	2.051	O	|	|	|	|	1.75
69.750	0.00	0.00	2.051	O	|	|	|	|	1.75
69.833	0.00	0.00	2.051	O	|	|	|	|	1.75
69.917	0.00	0.00	2.051	O	|	|	|	|	1.75
70.000	0.00	0.00	2.051	O	|	|	|	|	1.75
70.083	0.00	0.00	2.051	O	|	|	|	|	1.75
70.167	0.00	0.00	2.051	O	|	|	|	|	1.75
70.250	0.00	0.00	2.051	O	|	|	|	|	1.75
70.333	0.00	0.00	2.051	O	|	|	|	|	1.75
70.417	0.00	0.00	2.051	O	|	|	|	|	1.75
70.500	0.00	0.00	2.051	O	|	|	|	|	1.75
70.583	0.00	0.00	2.051	O	|	|	|	|	1.75
70.667	0.00	0.00	2.051	O	|	|	|	|	1.75
70.750	0.00	0.00	2.051	O	|	|	|	|	1.75
70.833	0.00	0.00	2.051	O	|	|	|	|	1.75
70.917	0.00	0.00	2.051	O	|	|	|	|	1.75
71.000	0.00	0.00	2.051	O	|	|	|	|	1.75
71.083	0.00	0.00	2.051	O	|	|	|	|	1.75
71.167	0.00	0.00	2.051	O	|	|	|	|	1.75
71.250	0.00	0.00	2.051	O	|	|	|	|	1.75
71.333	0.00	0.00	2.051	O	|	|	|	|	1.75
71.417	0.00	0.00	2.051	O	|	|	|	|	1.75
71.500	0.00	0.00	2.051	O	|	|	|	|	1.75
71.583	0.00	0.00	2.051	O	|	|	|	|	1.75
71.667	0.00	0.00	2.051	O	|	|	|	|	1.75
71.750	0.00	0.00	2.051	O	|	|	|	|	1.75
71.833	0.00	0.00	2.051	O	|	|	|	|	1.75
71.917	0.00	0.00	2.051	O	|	|	|	|	1.75
72.000	0.00	0.00	2.051	O	|	|	|	|	1.75
72.083	0.00	0.00	2.051	O	|	|	|	|	1.75
72.167	0.00	0.00	2.051	O	|	|	|	|	1.75
72.250	0.00	0.00	2.051	O	|	|	|	|	1.75
72.333	0.00	0.00	2.051	O	|	|	|	|	1.75
72.417	0.00	0.00	2.051	O	|	|	|	|	1.75
72.500	0.00	0.00	2.051	O	|	|	|	|	1.75
72.583	0.00	0.00	2.051	O	|	|	|	|	1.75
72.667	0.00	0.00	2.051	O	|	|	|	|	1.75
72.750	0.00	0.00	2.051	O	|	|	|	|	1.75
72.833	0.00	0.00	2.051	O	|	|	|	|	1.75
72.917	0.00	0.00	2.051	O	|	|	|	|	1.75
73.000	0.00	0.00	2.051	O	|	|	|	|	1.75
73.083	0.00	0.00	2.051	O	|	|	|	|	1.75

Remaining water in basin = 2.05 (Ac.Ft)

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

Number of intervals = 877
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.948 (CFS)
Total volume = 1.457 (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

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/23/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
MITIGATION ANALYSIS - 100-YEAR
3-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 2219PBAC3100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 40
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 63.883 (CFS)
Total volume = 5.468 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 40
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	1.100	0.000	1.100	1.100
1.750	2.050	0.000	2.050	2.050
2.000	2.380	0.470	2.378	2.382
2.750	3.480	0.950	3.477	3.483
3.000	3.860	8.620	3.830	3.890
4.000	5.540	18.330	5.477	5.603
5.000	7.410	24.390	7.326	7.494
5.500	8.430	26.920	8.337	8.523

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 16.0 31.94 47.91 63.88	Depth (Ft.)
0.083	3.58	0.00	0.012	OI	0.01
0.167	7.65	0.00	0.051	O I	0.05
0.250	7.98	0.00	0.105	O I	0.10
0.333	8.81	0.00	0.163	O I	0.15
0.417	10.11	0.00	0.228	O I	0.21
0.500	11.35	0.00	0.302	O I	0.27
0.583	11.58	0.00	0.381	O I	0.35
0.667	11.75	0.00	0.461	O I	0.42
0.750	12.77	0.00	0.545	O I	0.50
0.833	11.94	0.00	0.630	O I	0.57
0.917	11.14	0.00	0.710	O I	0.65
1.000	12.01	0.00	0.790	O I	0.72
1.083	14.23	0.00	0.880	O I	0.80
1.167	16.01	0.00	0.984	O I	0.89
1.250	16.45	0.00	1.096	O I	1.00
1.333	15.91	0.00	1.207	O I	1.08
1.417	17.32	0.00	1.322	O I	1.18
1.500	19.94	0.00	1.450	O I	1.28
1.583	19.73	0.00	1.587	O I	1.38
1.667	19.85	0.00	1.723	O I	1.49
1.750	23.09	0.00	1.871	O I	1.61
1.833	24.99	0.00	2.036	O I	1.74
1.917	24.04	0.22	2.204	O I	1.87
2.000	23.68	0.45	2.366	O I	1.99
2.083	24.30	0.53	2.528	O I	2.10
2.167	28.62	0.61	2.707	O I	2.22

2.250	36.04	0.71	2.925	O				I						2.37
2.333	34.95	0.81	3.164	O				I						2.53
2.417	41.77	0.92	3.422	O					I					2.71
2.500	56.13	6.10	3.735		O						I			2.92
2.583	63.88	9.97	4.093			O							I	3.14
2.667	60.69	12.01	4.446				O					I		3.35
2.750	38.96	13.48	4.702				O			I				3.50
2.833	20.78	14.12	4.812					O	I					3.57
2.917	15.86	14.29	4.841					O						3.58
3.000	10.36	14.24	4.833					I	O					3.58
3.083	3.96	13.97	4.785		I			O						3.55
3.167	1.18	13.52	4.708		I			O						3.50
3.250	0.42	13.02	4.622		I			O						3.45
3.333	0.08	12.53	4.536		I			O						3.40
3.417	0.00	12.04	4.452		I			O						3.35
3.500	0.00	11.57	4.370		I		O							3.30
3.583	0.00	11.12	4.292		I		O							3.26
3.667	0.00	10.68	4.217		I		O							3.21
3.750	0.00	10.27	4.145		I		O							3.17
3.833	0.00	9.87	4.076		I	O								3.13
3.917	0.00	9.48	4.009		I	O								3.09
4.000	0.00	9.11	3.945		I	O								3.05
4.083	0.00	8.76	3.883		I	O								3.01
4.167	0.00	7.93	3.826		I	O								2.98
4.250	0.00	6.90	3.775		I	O								2.94
4.333	0.00	6.00	3.730		I	O								2.91
4.417	0.00	5.22	3.692		I	O								2.89
4.500	0.00	4.55	3.658		I	O								2.87
4.583	0.00	3.95	3.629		I	O								2.85
4.667	0.00	3.44	3.603		I	O								2.83
4.750	0.00	2.99	3.581		I	O								2.82
4.833	0.00	2.60	3.562		I	O								2.80
4.917	0.00	2.27	3.545		I	O								2.79
5.000	0.00	1.97	3.531		O									2.78
5.083	0.00	1.72	3.518		O									2.77
5.167	0.00	1.49	3.507		O									2.77
5.250	0.00	1.30	3.497		O									2.76
5.333	0.00	1.13	3.489		O									2.76
5.417	0.00	0.98	3.482		O									2.75
5.500	0.00	0.95	3.475		O									2.75
5.583	0.00	0.94	3.468		O									2.74
5.667	0.00	0.94	3.462		O									2.74
5.750	0.00	0.94	3.455		O									2.73
5.833	0.00	0.94	3.449		O									2.73
5.917	0.00	0.93	3.443		O									2.72
6.000	0.00	0.93	3.436		O									2.72
6.083	0.00	0.93	3.430		O									2.72
6.167	0.00	0.93	3.423		O									2.71
6.250	0.00	0.92	3.417		O									2.71
6.333	0.00	0.92	3.411		O									2.70
6.417	0.00	0.92	3.404		O									2.70
6.500	0.00	0.91	3.398		O									2.69
6.583	0.00	0.91	3.392		O									2.69
6.667	0.00	0.91	3.385		O									2.69
6.750	0.00	0.91	3.379		O									2.68
6.833	0.00	0.90	3.373		O									2.68
6.917	0.00	0.90	3.367		O									2.67
7.000	0.00	0.90	3.361		O									2.67
7.083	0.00	0.90	3.354		O									2.66
7.167	0.00	0.89	3.348		O									2.66
7.250	0.00	0.89	3.342		O									2.66
7.333	0.00	0.89	3.336		O									2.65
7.417	0.00	0.88	3.330		O									2.65
7.500	0.00	0.88	3.324		O									2.64
7.583	0.00	0.88	3.318		O									2.64
7.667	0.00	0.88	3.312		O									2.64
7.750	0.00	0.87	3.306		O									2.63
7.833	0.00	0.87	3.300		O									2.63
7.917	0.00	0.87	3.294		O									2.62
8.000	0.00	0.87	3.288		O									2.62
8.083	0.00	0.86	3.282		O									2.61
8.167	0.00	0.86	3.276		O									2.61
8.250	0.00	0.86	3.270		O									2.61
8.333	0.00	0.86	3.264		O									2.60
8.417	0.00	0.85	3.258		O									2.60
8.500	0.00	0.85	3.252		O									2.59
8.583	0.00	0.85	3.246		O									2.59
8.667	0.00	0.85	3.241		O									2.59
8.750	0.00	0.84	3.235		O									2.58
8.833	0.00	0.84	3.229		O									2.58
8.917	0.00	0.84	3.223		O									2.57
9.000	0.00	0.84	3.217		O									2.57
9.083	0.00	0.83	3.212		O									2.57
9.167	0.00	0.83	3.206		O									2.56
9.250	0.00	0.83	3.200		O									2.56
9.333	0.00	0.83	3.195		O									2.56
9.417	0.00	0.82	3.189		O									2.55
9.500	0.00	0.82	3.183		O									2.55
9.583	0.00	0.82	3.178		O									2.54
9.667	0.00	0.82	3.172		O									2.54
9.750	0.00	0.81	3.166		O									2.54
9.833	0.00	0.81	3.161		O									2.53
9.917	0.00	0.81	3.155		O									2.53
10.000	0.00	0.81	3.150		O									2.52
10.083	0.00	0.80	3.144		O									2.52
10.167	0.00	0.80	3.139		O									2.52
10.250	0.00	0.80	3.133		O									2.51
10.333	0.00	0.80	3.128		O									2.51
10.417	0.00	0.79	3.122		O									2.51

10.500	0.00	0.79	3.117	O					2.50
10.583	0.00	0.79	3.111	O					2.50
10.667	0.00	0.79	3.106	O					2.49
10.750	0.00	0.78	3.100	O					2.49
10.833	0.00	0.78	3.095	O					2.49
10.917	0.00	0.78	3.090	O					2.48
11.000	0.00	0.78	3.084	O					2.48
11.083	0.00	0.77	3.079	O					2.48
11.167	0.00	0.77	3.074	O					2.47
11.250	0.00	0.77	3.068	O					2.47
11.333	0.00	0.77	3.063	O					2.47
11.417	0.00	0.77	3.058	O					2.46
11.500	0.00	0.76	3.052	O					2.46
11.583	0.00	0.76	3.047	O					2.45
11.667	0.00	0.76	3.042	O					2.45
11.750	0.00	0.76	3.037	O					2.45
11.833	0.00	0.75	3.031	O					2.44
11.917	0.00	0.75	3.026	O					2.44
12.000	0.00	0.75	3.021	O					2.44
12.083	0.00	0.75	3.016	O					2.43
12.167	0.00	0.75	3.011	O					2.43
12.250	0.00	0.74	3.006	O					2.43
12.333	0.00	0.74	3.001	O					2.42
12.417	0.00	0.74	2.995	O					2.42
12.500	0.00	0.74	2.990	O					2.42
12.583	0.00	0.73	2.985	O					2.41
12.667	0.00	0.73	2.980	O					2.41
12.750	0.00	0.73	2.975	O					2.41
12.833	0.00	0.73	2.970	O					2.40
12.917	0.00	0.73	2.965	O					2.40
13.000	0.00	0.72	2.960	O					2.40
13.083	0.00	0.72	2.955	O					2.39
13.167	0.00	0.72	2.950	O					2.39
13.250	0.00	0.72	2.945	O					2.39
13.333	0.00	0.71	2.940	O					2.38
13.417	0.00	0.71	2.936	O					2.38
13.500	0.00	0.71	2.931	O					2.38
13.583	0.00	0.71	2.926	O					2.37
13.667	0.00	0.71	2.921	O					2.37
13.750	0.00	0.70	2.916	O					2.37
13.833	0.00	0.70	2.911	O					2.36
13.917	0.00	0.70	2.906	O					2.36
14.000	0.00	0.70	2.902	O					2.36
14.083	0.00	0.70	2.897	O					2.35
14.167	0.00	0.69	2.892	O					2.35
14.250	0.00	0.69	2.887	O					2.35
14.333	0.00	0.69	2.882	O					2.34
14.417	0.00	0.69	2.878	O					2.34
14.500	0.00	0.69	2.873	O					2.34
14.583	0.00	0.68	2.868	O					2.33
14.667	0.00	0.68	2.864	O					2.33
14.750	0.00	0.68	2.859	O					2.33
14.833	0.00	0.68	2.854	O					2.32
14.917	0.00	0.67	2.850	O					2.32
15.000	0.00	0.67	2.845	O					2.32
15.083	0.00	0.67	2.840	O					2.31
15.167	0.00	0.67	2.836	O					2.31
15.250	0.00	0.67	2.831	O					2.31
15.333	0.00	0.66	2.826	O					2.30
15.417	0.00	0.66	2.822	O					2.30
15.500	0.00	0.66	2.817	O					2.30
15.583	0.00	0.66	2.813	O					2.30
15.667	0.00	0.66	2.808	O					2.29
15.750	0.00	0.65	2.804	O					2.29
15.833	0.00	0.65	2.799	O					2.29
15.917	0.00	0.65	2.795	O					2.28
16.000	0.00	0.65	2.790	O					2.28
16.083	0.00	0.65	2.786	O					2.28
16.167	0.00	0.65	2.781	O					2.27
16.250	0.00	0.64	2.777	O					2.27
16.333	0.00	0.64	2.773	O					2.27
16.417	0.00	0.64	2.768	O					2.26
16.500	0.00	0.64	2.764	O					2.26
16.583	0.00	0.64	2.759	O					2.26
16.667	0.00	0.63	2.755	O					2.26
16.750	0.00	0.63	2.751	O					2.25
16.833	0.00	0.63	2.746	O					2.25
16.917	0.00	0.63	2.742	O					2.25
17.000	0.00	0.63	2.738	O					2.24
17.083	0.00	0.62	2.733	O					2.24
17.167	0.00	0.62	2.729	O					2.24
17.250	0.00	0.62	2.725	O					2.24
17.333	0.00	0.62	2.720	O					2.23
17.417	0.00	0.62	2.716	O					2.23
17.500	0.00	0.61	2.712	O					2.23
17.583	0.00	0.61	2.708	O					2.22
17.667	0.00	0.61	2.704	O					2.22
17.750	0.00	0.61	2.699	O					2.22
17.833	0.00	0.61	2.695	O					2.21
17.917	0.00	0.61	2.691	O					2.21
18.000	0.00	0.60	2.687	O					2.21
18.083	0.00	0.60	2.683	O					2.21
18.167	0.00	0.60	2.678	O					2.20
18.250	0.00	0.60	2.674	O					2.20
18.333	0.00	0.60	2.670	O					2.20
18.417	0.00	0.59	2.666	O					2.20
18.500	0.00	0.59	2.662	O					2.19
18.583	0.00	0.59	2.658	O					2.19
18.667	0.00	0.59	2.654	O					2.19

18.750	0.00	0.59	2.650	O					2.18
18.833	0.00	0.59	2.646	O					2.18
18.917	0.00	0.58	2.642	O					2.18
19.000	0.00	0.58	2.638	O					2.18
19.083	0.00	0.58	2.634	O					2.17
19.167	0.00	0.58	2.630	O					2.17
19.250	0.00	0.58	2.626	O					2.17
19.333	0.00	0.58	2.622	O					2.16
19.417	0.00	0.57	2.618	O					2.16
19.500	0.00	0.57	2.614	O					2.16
19.583	0.00	0.57	2.610	O					2.16
19.667	0.00	0.57	2.606	O					2.15
19.750	0.00	0.57	2.602	O					2.15
19.833	0.00	0.57	2.598	O					2.15
19.917	0.00	0.56	2.594	O					2.15
20.000	0.00	0.56	2.590	O					2.14
20.083	0.00	0.56	2.587	O					2.14
20.167	0.00	0.56	2.583	O					2.14
20.250	0.00	0.56	2.579	O					2.14
20.333	0.00	0.56	2.575	O					2.13
20.417	0.00	0.55	2.571	O					2.13
20.500	0.00	0.55	2.567	O					2.13
20.583	0.00	0.55	2.564	O					2.13
20.667	0.00	0.55	2.560	O					2.12
20.750	0.00	0.55	2.556	O					2.12
20.833	0.00	0.55	2.552	O					2.12
20.917	0.00	0.54	2.549	O					2.11
21.000	0.00	0.54	2.545	O					2.11
21.083	0.00	0.54	2.541	O					2.11
21.167	0.00	0.54	2.537	O					2.11
21.250	0.00	0.54	2.534	O					2.10
21.333	0.00	0.54	2.530	O					2.10
21.417	0.00	0.53	2.526	O					2.10
21.500	0.00	0.53	2.523	O					2.10
21.583	0.00	0.53	2.519	O					2.09
21.667	0.00	0.53	2.515	O					2.09
21.750	0.00	0.53	2.512	O					2.09
21.833	0.00	0.53	2.508	O					2.09
21.917	0.00	0.52	2.504	O					2.08
22.000	0.00	0.52	2.501	O					2.08
22.083	0.00	0.52	2.497	O					2.08
22.167	0.00	0.52	2.494	O					2.08
22.250	0.00	0.52	2.490	O					2.08
22.333	0.00	0.52	2.487	O					2.07
22.417	0.00	0.51	2.483	O					2.07
22.500	0.00	0.51	2.479	O					2.07
22.583	0.00	0.51	2.476	O					2.07
22.667	0.00	0.51	2.472	O					2.06
22.750	0.00	0.51	2.469	O					2.06
22.833	0.00	0.51	2.465	O					2.06
22.917	0.00	0.51	2.462	O					2.06
23.000	0.00	0.50	2.458	O					2.05
23.083	0.00	0.50	2.455	O					2.05
23.167	0.00	0.50	2.452	O					2.05
23.250	0.00	0.50	2.448	O					2.05
23.333	0.00	0.50	2.445	O					2.04
23.417	0.00	0.50	2.441	O					2.04
23.500	0.00	0.50	2.438	O					2.04
23.583	0.00	0.49	2.434	O					2.04
23.667	0.00	0.49	2.431	O					2.03
23.750	0.00	0.49	2.428	O					2.03
23.833	0.00	0.49	2.424	O					2.03
23.917	0.00	0.49	2.421	O					2.03
24.000	0.00	0.49	2.418	O					2.03
24.083	0.00	0.48	2.414	O					2.02
24.167	0.00	0.48	2.411	O					2.02
24.250	0.00	0.48	2.408	O					2.02
24.333	0.00	0.48	2.404	O					2.02
24.417	0.00	0.48	2.401	O					2.01
24.500	0.00	0.48	2.398	O					2.01
24.583	0.00	0.48	2.394	O					2.01
24.667	0.00	0.47	2.391	O					2.01
24.750	0.00	0.47	2.388	O					2.01
24.833	0.00	0.47	2.385	O					2.00
24.917	0.00	0.47	2.381	O					2.00
25.000	0.00	0.47	2.378	O					2.00
25.083	0.00	0.46	2.375	O					2.00
25.167	0.00	0.46	2.372	O					1.99
25.250	0.00	0.45	2.369	O					1.99
25.333	0.00	0.45	2.365	O					1.99
25.417	0.00	0.44	2.362	O					1.99
25.500	0.00	0.44	2.359	O					1.98
25.583	0.00	0.44	2.356	O					1.98
25.667	0.00	0.43	2.353	O					1.98
25.750	0.00	0.43	2.350	O					1.98
25.833	0.00	0.42	2.347	O					1.98
25.917	0.00	0.42	2.345	O					1.97
26.000	0.00	0.42	2.342	O					1.97
26.083	0.00	0.41	2.339	O					1.97
26.167	0.00	0.41	2.336	O					1.97
26.250	0.00	0.40	2.333	O					1.96
26.333	0.00	0.40	2.330	O					1.96
26.417	0.00	0.40	2.328	O					1.96
26.500	0.00	0.39	2.325	O					1.96
26.583	0.00	0.39	2.322	O					1.96
26.667	0.00	0.38	2.320	O					1.95
26.750	0.00	0.38	2.317	O					1.95
26.833	0.00	0.38	2.314	O					1.95
26.917	0.00	0.37	2.312	O					1.95

27.000	0.00	0.37	2.309	O				1.95
27.083	0.00	0.37	2.307	O				1.94
27.167	0.00	0.36	2.304	O				1.94
27.250	0.00	0.36	2.302	O				1.94
27.333	0.00	0.36	2.299	O				1.94
27.417	0.00	0.35	2.297	O				1.94
27.500	0.00	0.35	2.294	O				1.94
27.583	0.00	0.34	2.292	O				1.93
27.667	0.00	0.34	2.290	O				1.93
27.750	0.00	0.34	2.287	O				1.93
27.833	0.00	0.33	2.285	O				1.93
27.917	0.00	0.33	2.283	O				1.93
28.000	0.00	0.33	2.280	O				1.92
28.083	0.00	0.33	2.278	O				1.92
28.167	0.00	0.32	2.276	O				1.92
28.250	0.00	0.32	2.274	O				1.92
28.333	0.00	0.32	2.272	O				1.92
28.417	0.00	0.31	2.269	O				1.92
28.500	0.00	0.31	2.267	O				1.91
28.583	0.00	0.31	2.265	O				1.91
28.667	0.00	0.30	2.263	O				1.91
28.750	0.00	0.30	2.261	O				1.91
28.833	0.00	0.30	2.259	O				1.91
28.917	0.00	0.29	2.257	O				1.91
29.000	0.00	0.29	2.255	O				1.91
29.083	0.00	0.29	2.253	O				1.90
29.167	0.00	0.29	2.251	O				1.90
29.250	0.00	0.28	2.249	O				1.90
29.333	0.00	0.28	2.247	O				1.90
29.417	0.00	0.28	2.245	O				1.90
29.500	0.00	0.28	2.243	O				1.90
29.583	0.00	0.27	2.241	O				1.89
29.667	0.00	0.27	2.239	O				1.89
29.750	0.00	0.27	2.238	O				1.89
29.833	0.00	0.26	2.236	O				1.89
29.917	0.00	0.26	2.234	O				1.89
30.000	0.00	0.26	2.232	O				1.89
30.083	0.00	0.26	2.230	O				1.89
30.167	0.00	0.25	2.229	O				1.89
30.250	0.00	0.25	2.227	O				1.88
30.333	0.00	0.25	2.225	O				1.88
30.417	0.00	0.25	2.223	O				1.88
30.500	0.00	0.24	2.222	O				1.88
30.583	0.00	0.24	2.220	O				1.88
30.667	0.00	0.24	2.218	O				1.88
30.750	0.00	0.24	2.217	O				1.88
30.833	0.00	0.24	2.215	O				1.88
30.917	0.00	0.23	2.213	O				1.87
31.000	0.00	0.23	2.212	O				1.87
31.083	0.00	0.23	2.210	O				1.87
31.167	0.00	0.23	2.209	O				1.87
31.250	0.00	0.22	2.207	O				1.87
31.333	0.00	0.22	2.206	O				1.87
31.417	0.00	0.22	2.204	O				1.87
31.500	0.00	0.22	2.203	O				1.87
31.583	0.00	0.22	2.201	O				1.86
31.667	0.00	0.21	2.200	O				1.86
31.750	0.00	0.21	2.198	O				1.86
31.833	0.00	0.21	2.197	O				1.86
31.917	0.00	0.21	2.195	O				1.86
32.000	0.00	0.20	2.194	O				1.86
32.083	0.00	0.20	2.193	O				1.86
32.167	0.00	0.20	2.191	O				1.86
32.250	0.00	0.20	2.190	O				1.86
32.333	0.00	0.20	2.188	O				1.85
32.417	0.00	0.20	2.187	O				1.85
32.500	0.00	0.19	2.186	O				1.85
32.583	0.00	0.19	2.184	O				1.85
32.667	0.00	0.19	2.183	O				1.85
32.750	0.00	0.19	2.182	O				1.85
32.833	0.00	0.19	2.180	O				1.85
32.917	0.00	0.18	2.179	O				1.85
33.000	0.00	0.18	2.178	O				1.85
33.083	0.00	0.18	2.177	O				1.85
33.167	0.00	0.18	2.175	O				1.85
33.250	0.00	0.18	2.174	O				1.84
33.333	0.00	0.18	2.173	O				1.84
33.417	0.00	0.17	2.172	O				1.84
33.500	0.00	0.17	2.171	O				1.84
33.583	0.00	0.17	2.169	O				1.84
33.667	0.00	0.17	2.168	O				1.84
33.750	0.00	0.17	2.167	O				1.84
33.833	0.00	0.17	2.166	O				1.84
33.917	0.00	0.16	2.165	O				1.84
34.000	0.00	0.16	2.164	O				1.84
34.083	0.00	0.16	2.163	O				1.84
34.167	0.00	0.16	2.162	O				1.83
34.250	0.00	0.16	2.160	O				1.83
34.333	0.00	0.16	2.159	O				1.83
34.417	0.00	0.15	2.158	O				1.83
34.500	0.00	0.15	2.157	O				1.83
34.583	0.00	0.15	2.156	O				1.83
34.667	0.00	0.15	2.155	O				1.83
34.750	0.00	0.15	2.154	O				1.83
34.833	0.00	0.15	2.153	O				1.83
34.917	0.00	0.15	2.152	O				1.83
35.000	0.00	0.14	2.151	O				1.83
35.083	0.00	0.14	2.150	O				1.83
35.167	0.00	0.14	2.149	O				1.83

35.250	0.00	0.14	2.148	O				1.82
35.333	0.00	0.14	2.147	O				1.82
35.417	0.00	0.14	2.146	O				1.82
35.500	0.00	0.14	2.145	O				1.82
35.583	0.00	0.13	2.144	O				1.82
35.667	0.00	0.13	2.143	O				1.82
35.750	0.00	0.13	2.143	O				1.82
35.833	0.00	0.13	2.142	O				1.82
35.917	0.00	0.13	2.141	O				1.82
36.000	0.00	0.13	2.140	O				1.82
36.083	0.00	0.13	2.139	O				1.82
36.167	0.00	0.13	2.138	O				1.82
36.250	0.00	0.12	2.137	O				1.82
36.333	0.00	0.12	2.136	O				1.82
36.417	0.00	0.12	2.136	O				1.81
36.500	0.00	0.12	2.135	O				1.81
36.583	0.00	0.12	2.134	O				1.81
36.667	0.00	0.12	2.133	O				1.81
36.750	0.00	0.12	2.132	O				1.81
36.833	0.00	0.12	2.131	O				1.81
36.917	0.00	0.11	2.131	O				1.81
37.000	0.00	0.11	2.130	O				1.81
37.083	0.00	0.11	2.129	O				1.81
37.167	0.00	0.11	2.128	O				1.81
37.250	0.00	0.11	2.128	O				1.81
37.333	0.00	0.11	2.127	O				1.81
37.417	0.00	0.11	2.126	O				1.81
37.500	0.00	0.11	2.125	O				1.81
37.583	0.00	0.11	2.125	O				1.81
37.667	0.00	0.11	2.124	O				1.81
37.750	0.00	0.10	2.123	O				1.81
37.833	0.00	0.10	2.122	O				1.80
37.917	0.00	0.10	2.122	O				1.80
38.000	0.00	0.10	2.121	O				1.80
38.083	0.00	0.10	2.120	O				1.80
38.167	0.00	0.10	2.120	O				1.80
38.250	0.00	0.10	2.119	O				1.80
38.333	0.00	0.10	2.118	O				1.80
38.417	0.00	0.10	2.118	O				1.80
38.500	0.00	0.10	2.117	O				1.80
38.583	0.00	0.09	2.116	O				1.80
38.667	0.00	0.09	2.116	O				1.80
38.750	0.00	0.09	2.115	O				1.80
38.833	0.00	0.09	2.114	O				1.80
38.917	0.00	0.09	2.114	O				1.80
39.000	0.00	0.09	2.113	O				1.80
39.083	0.00	0.09	2.113	O				1.80
39.167	0.00	0.09	2.112	O				1.80
39.250	0.00	0.09	2.111	O				1.80
39.333	0.00	0.09	2.111	O				1.80
39.417	0.00	0.09	2.110	O				1.80
39.500	0.00	0.08	2.110	O				1.80
39.583	0.00	0.08	2.109	O				1.79
39.667	0.00	0.08	2.108	O				1.79
39.750	0.00	0.08	2.108	O				1.79
39.833	0.00	0.08	2.107	O				1.79
39.917	0.00	0.08	2.107	O				1.79
40.000	0.00	0.08	2.106	O				1.79
40.083	0.00	0.08	2.106	O				1.79
40.167	0.00	0.08	2.105	O				1.79
40.250	0.00	0.08	2.104	O				1.79
40.333	0.00	0.08	2.104	O				1.79
40.417	0.00	0.08	2.103	O				1.79
40.500	0.00	0.08	2.103	O				1.79
40.583	0.00	0.07	2.102	O				1.79
40.667	0.00	0.07	2.102	O				1.79
40.750	0.00	0.07	2.101	O				1.79
40.833	0.00	0.07	2.101	O				1.79
40.917	0.00	0.07	2.100	O				1.79
41.000	0.00	0.07	2.100	O				1.79
41.083	0.00	0.07	2.099	O				1.79
41.167	0.00	0.07	2.099	O				1.79
41.250	0.00	0.07	2.098	O				1.79
41.333	0.00	0.07	2.098	O				1.79
41.417	0.00	0.07	2.098	O				1.79
41.500	0.00	0.07	2.097	O				1.79
41.583	0.00	0.07	2.097	O				1.79
41.667	0.00	0.07	2.096	O				1.78
41.750	0.00	0.07	2.096	O				1.78
41.833	0.00	0.06	2.095	O				1.78
41.917	0.00	0.06	2.095	O				1.78
42.000	0.00	0.06	2.094	O				1.78
42.083	0.00	0.06	2.094	O				1.78
42.167	0.00	0.06	2.093	O				1.78
42.250	0.00	0.06	2.093	O				1.78
42.333	0.00	0.06	2.093	O				1.78
42.417	0.00	0.06	2.092	O				1.78
42.500	0.00	0.06	2.092	O				1.78
42.583	0.00	0.06	2.091	O				1.78
42.667	0.00	0.06	2.091	O				1.78
42.750	0.00	0.06	2.091	O				1.78
42.833	0.00	0.06	2.090	O				1.78
42.917	0.00	0.06	2.090	O				1.78
43.000	0.00	0.06	2.089	O				1.78
43.083	0.00	0.06	2.089	O				1.78
43.167	0.00	0.06	2.089	O				1.78
43.250	0.00	0.05	2.088	O				1.78
43.333	0.00	0.05	2.088	O				1.78
43.417	0.00	0.05	2.088	O				1.78

43.500	0.00	0.05	2.087	O				1.78
43.583	0.00	0.05	2.087	O				1.78
43.667	0.00	0.05	2.086	O				1.78
43.750	0.00	0.05	2.086	O				1.78
43.833	0.00	0.05	2.086	O				1.78
43.917	0.00	0.05	2.085	O				1.78
44.000	0.00	0.05	2.085	O				1.78
44.083	0.00	0.05	2.085	O				1.78
44.167	0.00	0.05	2.084	O				1.78
44.250	0.00	0.05	2.084	O				1.78
44.333	0.00	0.05	2.084	O				1.78
44.417	0.00	0.05	2.083	O				1.78
44.500	0.00	0.05	2.083	O				1.78
44.583	0.00	0.05	2.083	O				1.77
44.667	0.00	0.05	2.082	O				1.77
44.750	0.00	0.05	2.082	O				1.77
44.833	0.00	0.05	2.082	O				1.77
44.917	0.00	0.04	2.081	O				1.77
45.000	0.00	0.04	2.081	O				1.77
45.083	0.00	0.04	2.081	O				1.77
45.167	0.00	0.04	2.081	O				1.77
45.250	0.00	0.04	2.080	O				1.77
45.333	0.00	0.04	2.080	O				1.77
45.417	0.00	0.04	2.080	O				1.77
45.500	0.00	0.04	2.079	O				1.77
45.583	0.00	0.04	2.079	O				1.77
45.667	0.00	0.04	2.079	O				1.77
45.750	0.00	0.04	2.079	O				1.77
45.833	0.00	0.04	2.078	O				1.77
45.917	0.00	0.04	2.078	O				1.77
46.000	0.00	0.04	2.078	O				1.77
46.083	0.00	0.04	2.077	O				1.77
46.167	0.00	0.04	2.077	O				1.77
46.250	0.00	0.04	2.077	O				1.77
46.333	0.00	0.04	2.077	O				1.77
46.417	0.00	0.04	2.076	O				1.77
46.500	0.00	0.04	2.076	O				1.77
46.583	0.00	0.04	2.076	O				1.77
46.667	0.00	0.04	2.076	O				1.77
46.750	0.00	0.04	2.075	O				1.77
46.833	0.00	0.04	2.075	O				1.77
46.917	0.00	0.04	2.075	O				1.77
47.000	0.00	0.04	2.075	O				1.77
47.083	0.00	0.03	2.074	O				1.77
47.167	0.00	0.03	2.074	O				1.77
47.250	0.00	0.03	2.074	O				1.77
47.333	0.00	0.03	2.074	O				1.77
47.417	0.00	0.03	2.073	O				1.77
47.500	0.00	0.03	2.073	O				1.77
47.583	0.00	0.03	2.073	O				1.77
47.667	0.00	0.03	2.073	O				1.77
47.750	0.00	0.03	2.073	O				1.77
47.833	0.00	0.03	2.072	O				1.77
47.917	0.00	0.03	2.072	O				1.77
48.000	0.00	0.03	2.072	O				1.77
48.083	0.00	0.03	2.072	O				1.77
48.167	0.00	0.03	2.071	O				1.77
48.250	0.00	0.03	2.071	O				1.77
48.333	0.00	0.03	2.071	O				1.77
48.417	0.00	0.03	2.071	O				1.77
48.500	0.00	0.03	2.071	O				1.77
48.583	0.00	0.03	2.070	O				1.77
48.667	0.00	0.03	2.070	O				1.77
48.750	0.00	0.03	2.070	O				1.77
48.833	0.00	0.03	2.070	O				1.77
48.917	0.00	0.03	2.070	O				1.76
49.000	0.00	0.03	2.069	O				1.76
49.083	0.00	0.03	2.069	O				1.76
49.167	0.00	0.03	2.069	O				1.76
49.250	0.00	0.03	2.069	O				1.76
49.333	0.00	0.03	2.069	O				1.76
49.417	0.00	0.03	2.069	O				1.76
49.500	0.00	0.03	2.068	O				1.76
49.583	0.00	0.03	2.068	O				1.76
49.667	0.00	0.03	2.068	O				1.76
49.750	0.00	0.03	2.068	O				1.76
49.833	0.00	0.03	2.068	O				1.76
49.917	0.00	0.02	2.067	O				1.76
50.000	0.00	0.02	2.067	O				1.76
50.083	0.00	0.02	2.067	O				1.76
50.167	0.00	0.02	2.067	O				1.76
50.250	0.00	0.02	2.067	O				1.76
50.333	0.00	0.02	2.067	O				1.76
50.417	0.00	0.02	2.066	O				1.76
50.500	0.00	0.02	2.066	O				1.76
50.583	0.00	0.02	2.066	O				1.76
50.667	0.00	0.02	2.066	O				1.76
50.750	0.00	0.02	2.066	O				1.76
50.833	0.00	0.02	2.066	O				1.76
50.917	0.00	0.02	2.066	O				1.76
51.000	0.00	0.02	2.065	O				1.76
51.083	0.00	0.02	2.065	O				1.76
51.167	0.00	0.02	2.065	O				1.76
51.250	0.00	0.02	2.065	O				1.76
51.333	0.00	0.02	2.065	O				1.76
51.417	0.00	0.02	2.065	O				1.76
51.500	0.00	0.02	2.064	O				1.76
51.583	0.00	0.02	2.064	O				1.76
51.667	0.00	0.02	2.064	O				1.76

51.750	0.00	0.02	2.064	O				1.76
51.833	0.00	0.02	2.064	O				1.76
51.917	0.00	0.02	2.064	O				1.76
52.000	0.00	0.02	2.064	O				1.76
52.083	0.00	0.02	2.064	O				1.76
52.167	0.00	0.02	2.063	O				1.76
52.250	0.00	0.02	2.063	O				1.76
52.333	0.00	0.02	2.063	O				1.76
52.417	0.00	0.02	2.063	O				1.76
52.500	0.00	0.02	2.063	O				1.76
52.583	0.00	0.02	2.063	O				1.76
52.667	0.00	0.02	2.063	O				1.76
52.750	0.00	0.02	2.063	O				1.76
52.833	0.00	0.02	2.062	O				1.76
52.917	0.00	0.02	2.062	O				1.76
53.000	0.00	0.02	2.062	O				1.76
53.083	0.00	0.02	2.062	O				1.76
53.167	0.00	0.02	2.062	O				1.76
53.250	0.00	0.02	2.062	O				1.76
53.333	0.00	0.02	2.062	O				1.76
53.417	0.00	0.02	2.062	O				1.76
53.500	0.00	0.02	2.061	O				1.76
53.583	0.00	0.02	2.061	O				1.76
53.667	0.00	0.02	2.061	O				1.76
53.750	0.00	0.02	2.061	O				1.76
53.833	0.00	0.02	2.061	O				1.76
53.917	0.00	0.02	2.061	O				1.76
54.000	0.00	0.02	2.061	O				1.76
54.083	0.00	0.02	2.061	O				1.76
54.167	0.00	0.02	2.061	O				1.76
54.250	0.00	0.01	2.060	O				1.76
54.333	0.00	0.01	2.060	O				1.76
54.417	0.00	0.01	2.060	O				1.76
54.500	0.00	0.01	2.060	O				1.76
54.583	0.00	0.01	2.060	O				1.76
54.667	0.00	0.01	2.060	O				1.76
54.750	0.00	0.01	2.060	O				1.76
54.833	0.00	0.01	2.060	O				1.76
54.917	0.00	0.01	2.060	O				1.76
55.000	0.00	0.01	2.060	O				1.76
55.083	0.00	0.01	2.060	O				1.76
55.167	0.00	0.01	2.059	O				1.76
55.250	0.00	0.01	2.059	O				1.76
55.333	0.00	0.01	2.059	O				1.76
55.417	0.00	0.01	2.059	O				1.76
55.500	0.00	0.01	2.059	O				1.76
55.583	0.00	0.01	2.059	O				1.76
55.667	0.00	0.01	2.059	O				1.76
55.750	0.00	0.01	2.059	O				1.76
55.833	0.00	0.01	2.059	O				1.76
55.917	0.00	0.01	2.059	O				1.76
56.000	0.00	0.01	2.059	O				1.76
56.083	0.00	0.01	2.058	O				1.76
56.167	0.00	0.01	2.058	O				1.76
56.250	0.00	0.01	2.058	O				1.76
56.333	0.00	0.01	2.058	O				1.76
56.417	0.00	0.01	2.058	O				1.76
56.500	0.00	0.01	2.058	O				1.76
56.583	0.00	0.01	2.058	O				1.76
56.667	0.00	0.01	2.058	O				1.76
56.750	0.00	0.01	2.058	O				1.76
56.833	0.00	0.01	2.058	O				1.76
56.917	0.00	0.01	2.058	O				1.76
57.000	0.00	0.01	2.058	O				1.76
57.083	0.00	0.01	2.058	O				1.76
57.167	0.00	0.01	2.057	O				1.76
57.250	0.00	0.01	2.057	O				1.76
57.333	0.00	0.01	2.057	O				1.76
57.417	0.00	0.01	2.057	O				1.76
57.500	0.00	0.01	2.057	O				1.76
57.583	0.00	0.01	2.057	O				1.76
57.667	0.00	0.01	2.057	O				1.76
57.750	0.00	0.01	2.057	O				1.76
57.833	0.00	0.01	2.057	O				1.76
57.917	0.00	0.01	2.057	O				1.76
58.000	0.00	0.01	2.057	O				1.76
58.083	0.00	0.01	2.057	O				1.76
58.167	0.00	0.01	2.057	O				1.76
58.250	0.00	0.01	2.057	O				1.75
58.333	0.00	0.01	2.056	O				1.75
58.417	0.00	0.01	2.056	O				1.75
58.500	0.00	0.01	2.056	O				1.75
58.583	0.00	0.01	2.056	O				1.75
58.667	0.00	0.01	2.056	O				1.75
58.750	0.00	0.01	2.056	O				1.75
58.833	0.00	0.01	2.056	O				1.75
58.917	0.00	0.01	2.056	O				1.75
59.000	0.00	0.01	2.056	O				1.75
59.083	0.00	0.01	2.056	O				1.75
59.167	0.00	0.01	2.056	O				1.75
59.250	0.00	0.01	2.056	O				1.75
59.333	0.00	0.01	2.056	O				1.75
59.417	0.00	0.01	2.056	O				1.75
59.500	0.00	0.01	2.056	O				1.75
59.583	0.00	0.01	2.056	O				1.75
59.667	0.00	0.01	2.056	O				1.75
59.750	0.00	0.01	2.055	O				1.75
59.833	0.00	0.01	2.055	O				1.75
59.917	0.00	0.01	2.055	O				1.75

60.000	0.00	0.01	2.055	O				1.75
60.083	0.00	0.01	2.055	O				1.75
60.167	0.00	0.01	2.055	O				1.75
60.250	0.00	0.01	2.055	O				1.75
60.333	0.00	0.01	2.055	O				1.75
60.417	0.00	0.01	2.055	O				1.75
60.500	0.00	0.01	2.055	O				1.75
60.583	0.00	0.01	2.055	O				1.75
60.667	0.00	0.01	2.055	O				1.75
60.750	0.00	0.01	2.055	O				1.75
60.833	0.00	0.01	2.055	O				1.75
60.917	0.00	0.01	2.055	O				1.75
61.000	0.00	0.01	2.055	O				1.75
61.083	0.00	0.01	2.055	O				1.75
61.167	0.00	0.01	2.055	O				1.75
61.250	0.00	0.01	2.055	O				1.75
61.333	0.00	0.01	2.055	O				1.75
61.417	0.00	0.01	2.055	O				1.75
61.500	0.00	0.01	2.054	O				1.75
61.583	0.00	0.01	2.054	O				1.75
61.667	0.00	0.01	2.054	O				1.75
61.750	0.00	0.01	2.054	O				1.75
61.833	0.00	0.01	2.054	O				1.75
61.917	0.00	0.01	2.054	O				1.75
62.000	0.00	0.01	2.054	O				1.75
62.083	0.00	0.01	2.054	O				1.75
62.167	0.00	0.01	2.054	O				1.75
62.250	0.00	0.01	2.054	O				1.75
62.333	0.00	0.01	2.054	O				1.75
62.417	0.00	0.01	2.054	O				1.75
62.500	0.00	0.01	2.054	O				1.75
62.583	0.00	0.01	2.054	O				1.75
62.667	0.00	0.01	2.054	O				1.75
62.750	0.00	0.01	2.054	O				1.75
62.833	0.00	0.01	2.054	O				1.75
62.917	0.00	0.01	2.054	O				1.75
63.000	0.00	0.01	2.054	O				1.75
63.083	0.00	0.01	2.054	O				1.75
63.167	0.00	0.01	2.054	O				1.75
63.250	0.00	0.01	2.054	O				1.75
63.333	0.00	0.01	2.054	O				1.75
63.417	0.00	0.01	2.054	O				1.75
63.500	0.00	0.01	2.054	O				1.75
63.583	0.00	0.00	2.053	O				1.75
63.667	0.00	0.00	2.053	O				1.75
63.750	0.00	0.00	2.053	O				1.75
63.833	0.00	0.00	2.053	O				1.75
63.917	0.00	0.00	2.053	O				1.75
64.000	0.00	0.00	2.053	O				1.75
64.083	0.00	0.00	2.053	O				1.75
64.167	0.00	0.00	2.053	O				1.75
64.250	0.00	0.00	2.053	O				1.75
64.333	0.00	0.00	2.053	O				1.75
64.417	0.00	0.00	2.053	O				1.75
64.500	0.00	0.00	2.053	O				1.75
64.583	0.00	0.00	2.053	O				1.75
64.667	0.00	0.00	2.053	O				1.75
64.750	0.00	0.00	2.053	O				1.75
64.833	0.00	0.00	2.053	O				1.75
64.917	0.00	0.00	2.053	O				1.75
65.000	0.00	0.00	2.053	O				1.75
65.083	0.00	0.00	2.053	O				1.75
65.167	0.00	0.00	2.053	O				1.75
65.250	0.00	0.00	2.053	O				1.75
65.333	0.00	0.00	2.053	O				1.75
65.417	0.00	0.00	2.053	O				1.75
65.500	0.00	0.00	2.053	O				1.75
65.583	0.00	0.00	2.053	O				1.75
65.667	0.00	0.00	2.053	O				1.75
65.750	0.00	0.00	2.053	O				1.75
65.833	0.00	0.00	2.053	O				1.75
65.917	0.00	0.00	2.053	O				1.75
66.000	0.00	0.00	2.053	O				1.75
66.083	0.00	0.00	2.053	O				1.75
66.167	0.00	0.00	2.053	O				1.75
66.250	0.00	0.00	2.053	O				1.75
66.333	0.00	0.00	2.053	O				1.75
66.417	0.00	0.00	2.053	O				1.75
66.500	0.00	0.00	2.052	O				1.75
66.583	0.00	0.00	2.052	O				1.75
66.667	0.00	0.00	2.052	O				1.75
66.750	0.00	0.00	2.052	O				1.75
66.833	0.00	0.00	2.052	O				1.75
66.917	0.00	0.00	2.052	O				1.75
67.000	0.00	0.00	2.052	O				1.75
67.083	0.00	0.00	2.052	O				1.75
67.167	0.00	0.00	2.052	O				1.75
67.250	0.00	0.00	2.052	O				1.75
67.333	0.00	0.00	2.052	O				1.75
67.417	0.00	0.00	2.052	O				1.75
67.500	0.00	0.00	2.052	O				1.75
67.583	0.00	0.00	2.052	O				1.75
67.667	0.00	0.00	2.052	O				1.75
67.750	0.00	0.00	2.052	O				1.75
67.833	0.00	0.00	2.052	O				1.75
67.917	0.00	0.00	2.052	O				1.75
68.000	0.00	0.00	2.052	O				1.75
68.083	0.00	0.00	2.052	O				1.75
68.167	0.00	0.00	2.052	O				1.75

68.250	0.00	0.00	2.052	O				1.75
68.333	0.00	0.00	2.052	O				1.75
68.417	0.00	0.00	2.052	O				1.75
68.500	0.00	0.00	2.052	O				1.75
68.583	0.00	0.00	2.052	O				1.75
68.667	0.00	0.00	2.052	O				1.75
68.750	0.00	0.00	2.052	O				1.75
68.833	0.00	0.00	2.052	O				1.75
68.917	0.00	0.00	2.052	O				1.75
69.000	0.00	0.00	2.052	O				1.75
69.083	0.00	0.00	2.052	O				1.75
69.167	0.00	0.00	2.052	O				1.75
69.250	0.00	0.00	2.052	O				1.75
69.333	0.00	0.00	2.052	O				1.75
69.417	0.00	0.00	2.052	O				1.75
69.500	0.00	0.00	2.052	O				1.75
69.583	0.00	0.00	2.052	O				1.75
69.667	0.00	0.00	2.052	O				1.75
69.750	0.00	0.00	2.052	O				1.75
69.833	0.00	0.00	2.052	O				1.75
69.917	0.00	0.00	2.052	O				1.75
70.000	0.00	0.00	2.052	O				1.75
70.083	0.00	0.00	2.052	O				1.75
70.167	0.00	0.00	2.052	O				1.75
70.250	0.00	0.00	2.052	O				1.75
70.333	0.00	0.00	2.052	O				1.75
70.417	0.00	0.00	2.052	O				1.75
70.500	0.00	0.00	2.052	O				1.75
70.583	0.00	0.00	2.052	O				1.75
70.667	0.00	0.00	2.052	O				1.75
70.750	0.00	0.00	2.052	O				1.75
70.833	0.00	0.00	2.051	O				1.75
70.917	0.00	0.00	2.051	O				1.75
71.000	0.00	0.00	2.051	O				1.75
71.083	0.00	0.00	2.051	O				1.75
71.167	0.00	0.00	2.051	O				1.75
71.250	0.00	0.00	2.051	O				1.75
71.333	0.00	0.00	2.051	O				1.75
71.417	0.00	0.00	2.051	O				1.75
71.500	0.00	0.00	2.051	O				1.75
71.583	0.00	0.00	2.051	O				1.75
71.667	0.00	0.00	2.051	O				1.75
71.750	0.00	0.00	2.051	O				1.75
71.833	0.00	0.00	2.051	O				1.75
71.917	0.00	0.00	2.051	O				1.75
72.000	0.00	0.00	2.051	O				1.75
72.083	0.00	0.00	2.051	O				1.75
72.167	0.00	0.00	2.051	O				1.75
72.250	0.00	0.00	2.051	O				1.75
72.333	0.00	0.00	2.051	O				1.75
72.417	0.00	0.00	2.051	O				1.75
72.500	0.00	0.00	2.051	O				1.75
72.583	0.00	0.00	2.051	O				1.75
72.667	0.00	0.00	2.051	O				1.75
72.750	0.00	0.00	2.051	O				1.75
72.833	0.00	0.00	2.051	O				1.75
72.917	0.00	0.00	2.051	O				1.75
73.000	0.00	0.00	2.051	O				1.75
73.083	0.00	0.00	2.051	O				1.75
73.167	0.00	0.00	2.051	O				1.75
73.250	0.00	0.00	2.051	O				1.75
73.333	0.00	0.00	2.051	O				1.75
73.417	0.00	0.00	2.051	O				1.75
73.500	0.00	0.00	2.051	O				1.75
73.583	0.00	0.00	2.051	O				1.75
73.667	0.00	0.00	2.051	O				1.75
73.750	0.00	0.00	2.051	O				1.75
73.833	0.00	0.00	2.051	O				1.75
73.917	0.00	0.00	2.051	O				1.75
74.000	0.00	0.00	2.051	O				1.75
74.083	0.00	0.00	2.051	O				1.75
74.167	0.00	0.00	2.051	O				1.75
74.250	0.00	0.00	2.051	O				1.75
74.333	0.00	0.00	2.051	O				1.75
74.417	0.00	0.00	2.051	O				1.75
74.500	0.00	0.00	2.051	O				1.75
74.583	0.00	0.00	2.051	O				1.75
74.667	0.00	0.00	2.051	O				1.75
74.750	0.00	0.00	2.051	O				1.75
74.833	0.00	0.00	2.051	O				1.75
74.917	0.00	0.00	2.051	O				1.75
75.000	0.00	0.00	2.051	O				1.75
75.083	0.00	0.00	2.051	O				1.75
75.167	0.00	0.00	2.051	O				1.75
75.250	0.00	0.00	2.051	O				1.75
75.333	0.00	0.00	2.051	O				1.75
75.417	0.00	0.00	2.051	O				1.75
75.500	0.00	0.00	2.051	O				1.75
75.583	0.00	0.00	2.051	O				1.75
75.667	0.00	0.00	2.051	O				1.75
75.750	0.00	0.00	2.051	O				1.75
75.833	0.00	0.00	2.051	O				1.75
75.917	0.00	0.00	2.051	O				1.75
76.000	0.00	0.00	2.051	O				1.75
76.083	0.00	0.00	2.051	O				1.75
76.167	0.00	0.00	2.051	O				1.75
76.250	0.00	0.00	2.051	O				1.75
76.333	0.00	0.00	2.051	O				1.75
76.417	0.00	0.00	2.051	O				1.75

76.500	0.00	0.00	2.051	O				1.75
76.583	0.00	0.00	2.051	O				1.75
76.667	0.00	0.00	2.051	O				1.75
76.750	0.00	0.00	2.051	O				1.75
76.833	0.00	0.00	2.051	O				1.75
76.917	0.00	0.00	2.051	O				1.75
77.000	0.00	0.00	2.051	O				1.75
77.083	0.00	0.00	2.051	O				1.75
77.167	0.00	0.00	2.051	O				1.75
77.250	0.00	0.00	2.051	O				1.75

Remaining water in basin = 2.05 (Ac.Ft)

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

Number of intervals = 927
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 14.288 (CFS)
Total volume = 3.417 (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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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/23/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
MITIGATION ANALYSIS - 100-YEAR
6-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 2219PBAC6100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 76
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 55.801 (CFS)
Total volume = 6.937 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 76
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	1.100	0.000	1.100	1.100
1.750	2.050	0.000	2.050	2.050
2.000	2.380	0.470	2.378	2.382
2.750	3.480	0.950	3.477	3.483
3.000	3.860	8.620	3.830	3.890
4.000	5.540	18.330	5.477	5.603
5.000	7.410	24.390	7.326	7.494
5.500	8.430	26.920	8.337	8.523

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 14.0 27.90 41.85 55.80	Depth (Ft.)
0.083	1.81	0.00	0.006	OI	0.01
0.167	4.23	0.00	0.027	O I	0.02
0.250	5.09	0.00	0.059	O I	0.05
0.333	5.36	0.00	0.095	O I	0.09
0.417	5.49	0.00	0.132	O I	0.12
0.500	5.87	0.00	0.172	O I	0.16
0.583	6.28	0.00	0.213	O I	0.19
0.667	6.37	0.00	0.257	O I	0.23
0.750	6.41	0.00	0.301	O I	0.27
0.833	6.42	0.00	0.345	O I	0.31
0.917	6.42	0.00	0.389	O I	0.35
1.000	6.79	0.00	0.435	O I	0.40
1.083	7.20	0.00	0.483	O I	0.44
1.167	7.29	0.00	0.533	O I	0.48
1.250	7.32	0.00	0.583	O I	0.53
1.333	7.34	0.00	0.634	O I	0.58
1.417	7.34	0.00	0.684	O I	0.62
1.500	7.34	0.00	0.735	O I	0.67
1.583	7.34	0.00	0.785	O I	0.71
1.667	7.34	0.00	0.836	O I	0.76
1.750	7.34	0.00	0.886	O I	0.81
1.833	7.34	0.00	0.937	O I	0.85
1.917	7.34	0.00	0.988	O I	0.90
2.000	7.70	0.00	1.039	O I	0.94
2.083	7.75	0.00	1.093	O I	0.99
2.167	7.79	0.00	1.146	O I	1.04

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10.500	0.00	0.89	3.348	O				2.66
10.583	0.00	0.89	3.342	O				2.66
10.667	0.00	0.89	3.336	O				2.65
10.750	0.00	0.88	3.329	O				2.65
10.833	0.00	0.88	3.323	O				2.64
10.917	0.00	0.88	3.317	O				2.64
11.000	0.00	0.88	3.311	O				2.63
11.083	0.00	0.87	3.305	O				2.63
11.167	0.00	0.87	3.299	O				2.63
11.250	0.00	0.87	3.293	O				2.62
11.333	0.00	0.87	3.287	O				2.62
11.417	0.00	0.86	3.281	O				2.61
11.500	0.00	0.86	3.275	O				2.61
11.583	0.00	0.86	3.269	O				2.61
11.667	0.00	0.86	3.264	O				2.60
11.750	0.00	0.85	3.258	O				2.60
11.833	0.00	0.85	3.252	O				2.59
11.917	0.00	0.85	3.246	O				2.59
12.000	0.00	0.85	3.240	O				2.59
12.083	0.00	0.84	3.234	O				2.58
12.167	0.00	0.84	3.228	O				2.58
12.250	0.00	0.84	3.223	O				2.57
12.333	0.00	0.84	3.217	O				2.57
12.417	0.00	0.83	3.211	O				2.57
12.500	0.00	0.83	3.205	O				2.56
12.583	0.00	0.83	3.200	O				2.56
12.667	0.00	0.83	3.194	O				2.56
12.750	0.00	0.82	3.188	O				2.55
12.833	0.00	0.82	3.183	O				2.55
12.917	0.00	0.82	3.177	O				2.54
13.000	0.00	0.82	3.171	O				2.54
13.083	0.00	0.81	3.166	O				2.54
13.167	0.00	0.81	3.160	O				2.53
13.250	0.00	0.81	3.155	O				2.53
13.333	0.00	0.81	3.149	O				2.52
13.417	0.00	0.80	3.144	O				2.52
13.500	0.00	0.80	3.138	O				2.52
13.583	0.00	0.80	3.133	O				2.51
13.667	0.00	0.80	3.127	O				2.51
13.750	0.00	0.79	3.122	O				2.51
13.833	0.00	0.79	3.116	O				2.50
13.917	0.00	0.79	3.111	O				2.50
14.000	0.00	0.79	3.105	O				2.49
14.083	0.00	0.78	3.100	O				2.49
14.167	0.00	0.78	3.095	O				2.49
14.250	0.00	0.78	3.089	O				2.48
14.333	0.00	0.78	3.084	O				2.48
14.417	0.00	0.77	3.078	O				2.48
14.500	0.00	0.77	3.073	O				2.47
14.583	0.00	0.77	3.068	O				2.47
14.667	0.00	0.77	3.062	O				2.47
14.750	0.00	0.77	3.057	O				2.46
14.833	0.00	0.76	3.052	O				2.46
14.917	0.00	0.76	3.047	O				2.45
15.000	0.00	0.76	3.041	O				2.45
15.083	0.00	0.76	3.036	O				2.45
15.167	0.00	0.75	3.031	O				2.44
15.250	0.00	0.75	3.026	O				2.44
15.333	0.00	0.75	3.021	O				2.44
15.417	0.00	0.75	3.016	O				2.43
15.500	0.00	0.75	3.010	O				2.43
15.583	0.00	0.74	3.005	O				2.43
15.667	0.00	0.74	3.000	O				2.42
15.750	0.00	0.74	2.995	O				2.42
15.833	0.00	0.74	2.990	O				2.42
15.917	0.00	0.73	2.985	O				2.41
16.000	0.00	0.73	2.980	O				2.41
16.083	0.00	0.73	2.975	O				2.41
16.167	0.00	0.73	2.970	O				2.40
16.250	0.00	0.73	2.965	O				2.40
16.333	0.00	0.72	2.960	O				2.40
16.417	0.00	0.72	2.955	O				2.39
16.500	0.00	0.72	2.950	O				2.39
16.583	0.00	0.72	2.945	O				2.39
16.667	0.00	0.71	2.940	O				2.38
16.750	0.00	0.71	2.935	O				2.38
16.833	0.00	0.71	2.930	O				2.38
16.917	0.00	0.71	2.925	O				2.37
17.000	0.00	0.71	2.920	O				2.37
17.083	0.00	0.70	2.916	O				2.37
17.167	0.00	0.70	2.911	O				2.36
17.250	0.00	0.70	2.906	O				2.36
17.333	0.00	0.70	2.901	O				2.36
17.417	0.00	0.70	2.896	O				2.35
17.500	0.00	0.69	2.892	O				2.35
17.583	0.00	0.69	2.887	O				2.35
17.667	0.00	0.69	2.882	O				2.34
17.750	0.00	0.69	2.877	O				2.34
17.833	0.00	0.68	2.873	O				2.34
17.917	0.00	0.68	2.868	O				2.33
18.000	0.00	0.68	2.863	O				2.33
18.083	0.00	0.68	2.859	O				2.33
18.167	0.00	0.68	2.854	O				2.32
18.250	0.00	0.67	2.849	O				2.32
18.333	0.00	0.67	2.845	O				2.32
18.417	0.00	0.67	2.840	O				2.31
18.500	0.00	0.67	2.835	O				2.31
18.583	0.00	0.67	2.831	O				2.31
18.667	0.00	0.66	2.826	O				2.30

18.750	0.00	0.66	2.822	O					2.30
18.833	0.00	0.66	2.817	O					2.30
18.917	0.00	0.66	2.812	O					2.29
19.000	0.00	0.66	2.808	O					2.29
19.083	0.00	0.65	2.803	O					2.29
19.167	0.00	0.65	2.799	O					2.29
19.250	0.00	0.65	2.794	O					2.28
19.333	0.00	0.65	2.790	O					2.28
19.417	0.00	0.65	2.785	O					2.28
19.500	0.00	0.64	2.781	O					2.27
19.583	0.00	0.64	2.777	O					2.27
19.667	0.00	0.64	2.772	O					2.27
19.750	0.00	0.64	2.768	O					2.26
19.833	0.00	0.64	2.763	O					2.26
19.917	0.00	0.64	2.759	O					2.26
20.000	0.00	0.63	2.755	O					2.26
20.083	0.00	0.63	2.750	O					2.25
20.167	0.00	0.63	2.746	O					2.25
20.250	0.00	0.63	2.742	O					2.25
20.333	0.00	0.63	2.737	O					2.24
20.417	0.00	0.62	2.733	O					2.24
20.500	0.00	0.62	2.729	O					2.24
20.583	0.00	0.62	2.724	O					2.23
20.667	0.00	0.62	2.720	O					2.23
20.750	0.00	0.62	2.716	O					2.23
20.833	0.00	0.61	2.712	O					2.23
20.917	0.00	0.61	2.707	O					2.22
21.000	0.00	0.61	2.703	O					2.22
21.083	0.00	0.61	2.699	O					2.22
21.167	0.00	0.61	2.695	O					2.21
21.250	0.00	0.61	2.691	O					2.21
21.333	0.00	0.60	2.686	O					2.21
21.417	0.00	0.60	2.682	O					2.21
21.500	0.00	0.60	2.678	O					2.20
21.583	0.00	0.60	2.674	O					2.20
21.667	0.00	0.60	2.670	O					2.20
21.750	0.00	0.59	2.666	O					2.19
21.833	0.00	0.59	2.662	O					2.19
21.917	0.00	0.59	2.658	O					2.19
22.000	0.00	0.59	2.654	O					2.19
22.083	0.00	0.59	2.650	O					2.18
22.167	0.00	0.59	2.646	O					2.18
22.250	0.00	0.58	2.641	O					2.18
22.333	0.00	0.58	2.637	O					2.18
22.417	0.00	0.58	2.633	O					2.17
22.500	0.00	0.58	2.629	O					2.17
22.583	0.00	0.58	2.625	O					2.17
22.667	0.00	0.58	2.622	O					2.16
22.750	0.00	0.57	2.618	O					2.16
22.833	0.00	0.57	2.614	O					2.16
22.917	0.00	0.57	2.610	O					2.16
23.000	0.00	0.57	2.606	O					2.15
23.083	0.00	0.57	2.602	O					2.15
23.167	0.00	0.57	2.598	O					2.15
23.250	0.00	0.56	2.594	O					2.15
23.333	0.00	0.56	2.590	O					2.14
23.417	0.00	0.56	2.586	O					2.14
23.500	0.00	0.56	2.582	O					2.14
23.583	0.00	0.56	2.579	O					2.14
23.667	0.00	0.56	2.575	O					2.13
23.750	0.00	0.55	2.571	O					2.13
23.833	0.00	0.55	2.567	O					2.13
23.917	0.00	0.55	2.563	O					2.13
24.000	0.00	0.55	2.560	O					2.12
24.083	0.00	0.55	2.556	O					2.12
24.167	0.00	0.55	2.552	O					2.12
24.250	0.00	0.54	2.548	O					2.11
24.333	0.00	0.54	2.545	O					2.11
24.417	0.00	0.54	2.541	O					2.11
24.500	0.00	0.54	2.537	O					2.11
24.583	0.00	0.54	2.533	O					2.10
24.667	0.00	0.54	2.530	O					2.10
24.750	0.00	0.53	2.526	O					2.10
24.833	0.00	0.53	2.522	O					2.10
24.917	0.00	0.53	2.519	O					2.09
25.000	0.00	0.53	2.515	O					2.09
25.083	0.00	0.53	2.511	O					2.09
25.167	0.00	0.53	2.508	O					2.09
25.250	0.00	0.52	2.504	O					2.08
25.333	0.00	0.52	2.501	O					2.08
25.417	0.00	0.52	2.497	O					2.08
25.500	0.00	0.52	2.493	O					2.08
25.583	0.00	0.52	2.490	O					2.07
25.667	0.00	0.52	2.486	O					2.07
25.750	0.00	0.51	2.483	O					2.07
25.833	0.00	0.51	2.479	O					2.07
25.917	0.00	0.51	2.476	O					2.07
26.000	0.00	0.51	2.472	O					2.06
26.083	0.00	0.51	2.469	O					2.06
26.167	0.00	0.51	2.465	O					2.06
26.250	0.00	0.51	2.462	O					2.06
26.333	0.00	0.50	2.458	O					2.05
26.417	0.00	0.50	2.455	O					2.05
26.500	0.00	0.50	2.451	O					2.05
26.583	0.00	0.50	2.448	O					2.05
26.667	0.00	0.50	2.444	O					2.04
26.750	0.00	0.50	2.441	O					2.04
26.833	0.00	0.50	2.438	O					2.04
26.917	0.00	0.49	2.434	O					2.04

27.000	0.00	0.49	2.431	O				2.03
27.083	0.00	0.49	2.427	O				2.03
27.167	0.00	0.49	2.424	O				2.03
27.250	0.00	0.49	2.421	O				2.03
27.333	0.00	0.49	2.417	O				2.03
27.417	0.00	0.48	2.414	O				2.02
27.500	0.00	0.48	2.411	O				2.02
27.583	0.00	0.48	2.407	O				2.02
27.667	0.00	0.48	2.404	O				2.02
27.750	0.00	0.48	2.401	O				2.01
27.833	0.00	0.48	2.397	O				2.01
27.917	0.00	0.48	2.394	O				2.01
28.000	0.00	0.47	2.391	O				2.01
28.083	0.00	0.47	2.388	O				2.01
28.167	0.00	0.47	2.384	O				2.00
28.250	0.00	0.47	2.381	O				2.00
28.333	0.00	0.47	2.378	O				2.00
28.417	0.00	0.46	2.375	O				2.00
28.500	0.00	0.46	2.371	O				1.99
28.583	0.00	0.45	2.368	O				1.99
28.667	0.00	0.45	2.365	O				1.99
28.750	0.00	0.44	2.362	O				1.99
28.833	0.00	0.44	2.359	O				1.98
28.917	0.00	0.44	2.356	O				1.98
29.000	0.00	0.43	2.353	O				1.98
29.083	0.00	0.43	2.350	O				1.98
29.167	0.00	0.42	2.347	O				1.98
29.250	0.00	0.42	2.344	O				1.97
29.333	0.00	0.42	2.341	O				1.97
29.417	0.00	0.41	2.339	O				1.97
29.500	0.00	0.41	2.336	O				1.97
29.583	0.00	0.40	2.333	O				1.96
29.667	0.00	0.40	2.330	O				1.96
29.750	0.00	0.40	2.327	O				1.96
29.833	0.00	0.39	2.325	O				1.96
29.917	0.00	0.39	2.322	O				1.96
30.000	0.00	0.38	2.319	O				1.95
30.083	0.00	0.38	2.317	O				1.95
30.167	0.00	0.38	2.314	O				1.95
30.250	0.00	0.37	2.312	O				1.95
30.333	0.00	0.37	2.309	O				1.95
30.417	0.00	0.37	2.307	O				1.94
30.500	0.00	0.36	2.304	O				1.94
30.583	0.00	0.36	2.302	O				1.94
30.667	0.00	0.35	2.299	O				1.94
30.750	0.00	0.35	2.297	O				1.94
30.833	0.00	0.35	2.294	O				1.94
30.917	0.00	0.34	2.292	O				1.93
31.000	0.00	0.34	2.289	O				1.93
31.083	0.00	0.34	2.287	O				1.93
31.167	0.00	0.33	2.285	O				1.93
31.250	0.00	0.33	2.283	O				1.93
31.333	0.00	0.33	2.280	O				1.92
31.417	0.00	0.32	2.278	O				1.92
31.500	0.00	0.32	2.276	O				1.92
31.583	0.00	0.32	2.274	O				1.92
31.667	0.00	0.32	2.271	O				1.92
31.750	0.00	0.31	2.269	O				1.92
31.833	0.00	0.31	2.267	O				1.91
31.917	0.00	0.31	2.265	O				1.91
32.000	0.00	0.30	2.263	O				1.91
32.083	0.00	0.30	2.261	O				1.91
32.167	0.00	0.30	2.259	O				1.91
32.250	0.00	0.29	2.257	O				1.91
32.333	0.00	0.29	2.255	O				1.91
32.417	0.00	0.29	2.253	O				1.90
32.500	0.00	0.29	2.251	O				1.90
32.583	0.00	0.28	2.249	O				1.90
32.667	0.00	0.28	2.247	O				1.90
32.750	0.00	0.28	2.245	O				1.90
32.833	0.00	0.27	2.243	O				1.90
32.917	0.00	0.27	2.241	O				1.89
33.000	0.00	0.27	2.239	O				1.89
33.083	0.00	0.27	2.237	O				1.89
33.167	0.00	0.26	2.236	O				1.89
33.250	0.00	0.26	2.234	O				1.89
33.333	0.00	0.26	2.232	O				1.89
33.417	0.00	0.26	2.230	O				1.89
33.500	0.00	0.25	2.228	O				1.89
33.583	0.00	0.25	2.227	O				1.88
33.667	0.00	0.25	2.225	O				1.88
33.750	0.00	0.25	2.223	O				1.88
33.833	0.00	0.24	2.222	O				1.88
33.917	0.00	0.24	2.220	O				1.88
34.000	0.00	0.24	2.218	O				1.88
34.083	0.00	0.24	2.217	O				1.88
34.167	0.00	0.23	2.215	O				1.87
34.250	0.00	0.23	2.213	O				1.87
34.333	0.00	0.23	2.212	O				1.87
34.417	0.00	0.23	2.210	O				1.87
34.500	0.00	0.23	2.209	O				1.87
34.583	0.00	0.22	2.207	O				1.87
34.667	0.00	0.22	2.206	O				1.87
34.750	0.00	0.22	2.204	O				1.87
34.833	0.00	0.22	2.203	O				1.87
34.917	0.00	0.22	2.201	O				1.86
35.000	0.00	0.21	2.200	O				1.86
35.083	0.00	0.21	2.198	O				1.86
35.167	0.00	0.21	2.197	O				1.86

35.250	0.00	0.21	2.195	O				1.86
35.333	0.00	0.20	2.194	O				1.86
35.417	0.00	0.20	2.192	O				1.86
35.500	0.00	0.20	2.191	O				1.86
35.583	0.00	0.20	2.190	O				1.86
35.667	0.00	0.20	2.188	O				1.85
35.750	0.00	0.20	2.187	O				1.85
35.833	0.00	0.19	2.186	O				1.85
35.917	0.00	0.19	2.184	O				1.85
36.000	0.00	0.19	2.183	O				1.85
36.083	0.00	0.19	2.182	O				1.85
36.167	0.00	0.19	2.180	O				1.85
36.250	0.00	0.18	2.179	O				1.85
36.333	0.00	0.18	2.178	O				1.85
36.417	0.00	0.18	2.177	O				1.85
36.500	0.00	0.18	2.175	O				1.84
36.583	0.00	0.18	2.174	O				1.84
36.667	0.00	0.18	2.173	O				1.84
36.750	0.00	0.17	2.172	O				1.84
36.833	0.00	0.17	2.171	O				1.84
36.917	0.00	0.17	2.169	O				1.84
37.000	0.00	0.17	2.168	O				1.84
37.083	0.00	0.17	2.167	O				1.84
37.167	0.00	0.17	2.166	O				1.84
37.250	0.00	0.16	2.165	O				1.84
37.333	0.00	0.16	2.164	O				1.84
37.417	0.00	0.16	2.163	O				1.84
37.500	0.00	0.16	2.161	O				1.83
37.583	0.00	0.16	2.160	O				1.83
37.667	0.00	0.16	2.159	O				1.83
37.750	0.00	0.15	2.158	O				1.83
37.833	0.00	0.15	2.157	O				1.83
37.917	0.00	0.15	2.156	O				1.83
38.000	0.00	0.15	2.155	O				1.83
38.083	0.00	0.15	2.154	O				1.83
38.167	0.00	0.15	2.153	O				1.83
38.250	0.00	0.15	2.152	O				1.83
38.333	0.00	0.14	2.151	O				1.83
38.417	0.00	0.14	2.150	O				1.83
38.500	0.00	0.14	2.149	O				1.83
38.583	0.00	0.14	2.148	O				1.82
38.667	0.00	0.14	2.147	O				1.82
38.750	0.00	0.14	2.146	O				1.82
38.833	0.00	0.14	2.145	O				1.82
38.917	0.00	0.13	2.144	O				1.82
39.000	0.00	0.13	2.143	O				1.82
39.083	0.00	0.13	2.142	O				1.82
39.167	0.00	0.13	2.142	O				1.82
39.250	0.00	0.13	2.141	O				1.82
39.333	0.00	0.13	2.140	O				1.82
39.417	0.00	0.13	2.139	O				1.82
39.500	0.00	0.13	2.138	O				1.82
39.583	0.00	0.12	2.137	O				1.82
39.667	0.00	0.12	2.136	O				1.82
39.750	0.00	0.12	2.136	O				1.81
39.833	0.00	0.12	2.135	O				1.81
39.917	0.00	0.12	2.134	O				1.81
40.000	0.00	0.12	2.133	O				1.81
40.083	0.00	0.12	2.132	O				1.81
40.167	0.00	0.12	2.131	O				1.81
40.250	0.00	0.11	2.131	O				1.81
40.333	0.00	0.11	2.130	O				1.81
40.417	0.00	0.11	2.129	O				1.81
40.500	0.00	0.11	2.128	O				1.81
40.583	0.00	0.11	2.128	O				1.81
40.667	0.00	0.11	2.127	O				1.81
40.750	0.00	0.11	2.126	O				1.81
40.833	0.00	0.11	2.125	O				1.81
40.917	0.00	0.11	2.125	O				1.81
41.000	0.00	0.11	2.124	O				1.81
41.083	0.00	0.10	2.123	O				1.81
41.167	0.00	0.10	2.122	O				1.80
41.250	0.00	0.10	2.122	O				1.80
41.333	0.00	0.10	2.121	O				1.80
41.417	0.00	0.10	2.120	O				1.80
41.500	0.00	0.10	2.120	O				1.80
41.583	0.00	0.10	2.119	O				1.80
41.667	0.00	0.10	2.118	O				1.80
41.750	0.00	0.10	2.118	O				1.80
41.833	0.00	0.10	2.117	O				1.80
41.917	0.00	0.09	2.116	O				1.80
42.000	0.00	0.09	2.116	O				1.80
42.083	0.00	0.09	2.115	O				1.80
42.167	0.00	0.09	2.114	O				1.80
42.250	0.00	0.09	2.114	O				1.80
42.333	0.00	0.09	2.113	O				1.80
42.417	0.00	0.09	2.112	O				1.80
42.500	0.00	0.09	2.112	O				1.80
42.583	0.00	0.09	2.111	O				1.80
42.667	0.00	0.09	2.111	O				1.80
42.750	0.00	0.09	2.110	O				1.80
42.833	0.00	0.08	2.109	O				1.80
42.917	0.00	0.08	2.109	O				1.79
43.000	0.00	0.08	2.108	O				1.79
43.083	0.00	0.08	2.108	O				1.79
43.167	0.00	0.08	2.107	O				1.79
43.250	0.00	0.08	2.107	O				1.79
43.333	0.00	0.08	2.106	O				1.79
43.417	0.00	0.08	2.106	O				1.79

43.500	0.00	0.08	2.105	O					1.79
43.583	0.00	0.08	2.104	O					1.79
43.667	0.00	0.08	2.104	O					1.79
43.750	0.00	0.08	2.103	O					1.79
43.833	0.00	0.08	2.103	O					1.79
43.917	0.00	0.07	2.102	O					1.79
44.000	0.00	0.07	2.102	O					1.79
44.083	0.00	0.07	2.101	O					1.79
44.167	0.00	0.07	2.101	O					1.79
44.250	0.00	0.07	2.100	O					1.79
44.333	0.00	0.07	2.100	O					1.79
44.417	0.00	0.07	2.099	O					1.79
44.500	0.00	0.07	2.099	O					1.79
44.583	0.00	0.07	2.098	O					1.79
44.667	0.00	0.07	2.098	O					1.79
44.750	0.00	0.07	2.097	O					1.79
44.833	0.00	0.07	2.097	O					1.79
44.917	0.00	0.07	2.097	O					1.79
45.000	0.00	0.07	2.096	O					1.78
45.083	0.00	0.07	2.096	O					1.78
45.167	0.00	0.06	2.095	O					1.78
45.250	0.00	0.06	2.095	O					1.78
45.333	0.00	0.06	2.094	O					1.78
45.417	0.00	0.06	2.094	O					1.78
45.500	0.00	0.06	2.093	O					1.78
45.583	0.00	0.06	2.093	O					1.78
45.667	0.00	0.06	2.093	O					1.78
45.750	0.00	0.06	2.092	O					1.78
45.833	0.00	0.06	2.092	O					1.78
45.917	0.00	0.06	2.091	O					1.78
46.000	0.00	0.06	2.091	O					1.78
46.083	0.00	0.06	2.091	O					1.78
46.167	0.00	0.06	2.090	O					1.78
46.250	0.00	0.06	2.090	O					1.78
46.333	0.00	0.06	2.089	O					1.78
46.417	0.00	0.06	2.089	O					1.78
46.500	0.00	0.06	2.089	O					1.78
46.583	0.00	0.05	2.088	O					1.78
46.667	0.00	0.05	2.088	O					1.78
46.750	0.00	0.05	2.088	O					1.78
46.833	0.00	0.05	2.087	O					1.78
46.917	0.00	0.05	2.087	O					1.78
47.000	0.00	0.05	2.086	O					1.78
47.083	0.00	0.05	2.086	O					1.78
47.167	0.00	0.05	2.086	O					1.78
47.250	0.00	0.05	2.085	O					1.78
47.333	0.00	0.05	2.085	O					1.78
47.417	0.00	0.05	2.085	O					1.78
47.500	0.00	0.05	2.084	O					1.78
47.583	0.00	0.05	2.084	O					1.78
47.667	0.00	0.05	2.084	O					1.78
47.750	0.00	0.05	2.083	O					1.78
47.833	0.00	0.05	2.083	O					1.78
47.917	0.00	0.05	2.083	O					1.77
48.000	0.00	0.05	2.082	O					1.77
48.083	0.00	0.05	2.082	O					1.77
48.167	0.00	0.05	2.082	O					1.77
48.250	0.00	0.04	2.081	O					1.77
48.333	0.00	0.04	2.081	O					1.77
48.417	0.00	0.04	2.081	O					1.77
48.500	0.00	0.04	2.081	O					1.77
48.583	0.00	0.04	2.080	O					1.77
48.667	0.00	0.04	2.080	O					1.77
48.750	0.00	0.04	2.080	O					1.77
48.833	0.00	0.04	2.079	O					1.77
48.917	0.00	0.04	2.079	O					1.77
49.000	0.00	0.04	2.079	O					1.77
49.083	0.00	0.04	2.079	O					1.77
49.167	0.00	0.04	2.078	O					1.77
49.250	0.00	0.04	2.078	O					1.77
49.333	0.00	0.04	2.078	O					1.77
49.417	0.00	0.04	2.077	O					1.77
49.500	0.00	0.04	2.077	O					1.77
49.583	0.00	0.04	2.077	O					1.77
49.667	0.00	0.04	2.077	O					1.77
49.750	0.00	0.04	2.076	O					1.77
49.833	0.00	0.04	2.076	O					1.77
49.917	0.00	0.04	2.076	O					1.77
50.000	0.00	0.04	2.076	O					1.77
50.083	0.00	0.04	2.075	O					1.77
50.167	0.00	0.04	2.075	O					1.77
50.250	0.00	0.04	2.075	O					1.77
50.333	0.00	0.04	2.075	O					1.77
50.417	0.00	0.03	2.074	O					1.77
50.500	0.00	0.03	2.074	O					1.77
50.583	0.00	0.03	2.074	O					1.77
50.667	0.00	0.03	2.074	O					1.77
50.750	0.00	0.03	2.073	O					1.77
50.833	0.00	0.03	2.073	O					1.77
50.917	0.00	0.03	2.073	O					1.77
51.000	0.00	0.03	2.073	O					1.77
51.083	0.00	0.03	2.073	O					1.77
51.167	0.00	0.03	2.072	O					1.77
51.250	0.00	0.03	2.072	O					1.77
51.333	0.00	0.03	2.072	O					1.77
51.417	0.00	0.03	2.072	O					1.77
51.500	0.00	0.03	2.071	O					1.77
51.583	0.00	0.03	2.071	O					1.77
51.667	0.00	0.03	2.071	O					1.77

51.750	0.00	0.03	2.071	O					1.77
51.833	0.00	0.03	2.071	O					1.77
51.917	0.00	0.03	2.070	O					1.77
52.000	0.00	0.03	2.070	O					1.77
52.083	0.00	0.03	2.070	O					1.77
52.167	0.00	0.03	2.070	O					1.77
52.250	0.00	0.03	2.070	O					1.76
52.333	0.00	0.03	2.069	O					1.76
52.417	0.00	0.03	2.069	O					1.76
52.500	0.00	0.03	2.069	O					1.76
52.583	0.00	0.03	2.069	O					1.76
52.667	0.00	0.03	2.069	O					1.76
52.750	0.00	0.03	2.069	O					1.76
52.833	0.00	0.03	2.068	O					1.76
52.917	0.00	0.03	2.068	O					1.76
53.000	0.00	0.03	2.068	O					1.76
53.083	0.00	0.03	2.068	O					1.76
53.167	0.00	0.03	2.068	O					1.76
53.250	0.00	0.02	2.067	O					1.76
53.333	0.00	0.02	2.067	O					1.76
53.417	0.00	0.02	2.067	O					1.76
53.500	0.00	0.02	2.067	O					1.76
53.583	0.00	0.02	2.067	O					1.76
53.667	0.00	0.02	2.067	O					1.76
53.750	0.00	0.02	2.066	O					1.76
53.833	0.00	0.02	2.066	O					1.76
53.917	0.00	0.02	2.066	O					1.76
54.000	0.00	0.02	2.066	O					1.76
54.083	0.00	0.02	2.066	O					1.76
54.167	0.00	0.02	2.066	O					1.76
54.250	0.00	0.02	2.066	O					1.76
54.333	0.00	0.02	2.065	O					1.76
54.417	0.00	0.02	2.065	O					1.76
54.500	0.00	0.02	2.065	O					1.76
54.583	0.00	0.02	2.065	O					1.76
54.667	0.00	0.02	2.065	O					1.76
54.750	0.00	0.02	2.065	O					1.76
54.833	0.00	0.02	2.064	O					1.76
54.917	0.00	0.02	2.064	O					1.76
55.000	0.00	0.02	2.064	O					1.76
55.083	0.00	0.02	2.064	O					1.76
55.167	0.00	0.02	2.064	O					1.76
55.250	0.00	0.02	2.064	O					1.76
55.333	0.00	0.02	2.064	O					1.76
55.417	0.00	0.02	2.064	O					1.76
55.500	0.00	0.02	2.063	O					1.76
55.583	0.00	0.02	2.063	O					1.76
55.667	0.00	0.02	2.063	O					1.76
55.750	0.00	0.02	2.063	O					1.76
55.833	0.00	0.02	2.063	O					1.76
55.917	0.00	0.02	2.063	O					1.76
56.000	0.00	0.02	2.063	O					1.76
56.083	0.00	0.02	2.063	O					1.76
56.167	0.00	0.02	2.062	O					1.76
56.250	0.00	0.02	2.062	O					1.76
56.333	0.00	0.02	2.062	O					1.76
56.417	0.00	0.02	2.062	O					1.76
56.500	0.00	0.02	2.062	O					1.76
56.583	0.00	0.02	2.062	O					1.76
56.667	0.00	0.02	2.062	O					1.76
56.750	0.00	0.02	2.062	O					1.76
56.833	0.00	0.02	2.061	O					1.76
56.917	0.00	0.02	2.061	O					1.76
57.000	0.00	0.02	2.061	O					1.76
57.083	0.00	0.02	2.061	O					1.76
57.167	0.00	0.02	2.061	O					1.76
57.250	0.00	0.02	2.061	O					1.76
57.333	0.00	0.02	2.061	O					1.76
57.417	0.00	0.02	2.061	O					1.76
57.500	0.00	0.02	2.061	O					1.76
57.583	0.00	0.01	2.060	O					1.76
57.667	0.00	0.01	2.060	O					1.76
57.750	0.00	0.01	2.060	O					1.76
57.833	0.00	0.01	2.060	O					1.76
57.917	0.00	0.01	2.060	O					1.76
58.000	0.00	0.01	2.060	O					1.76
58.083	0.00	0.01	2.060	O					1.76
58.167	0.00	0.01	2.060	O					1.76
58.250	0.00	0.01	2.060	O					1.76
58.333	0.00	0.01	2.060	O					1.76
58.417	0.00	0.01	2.060	O					1.76
58.500	0.00	0.01	2.059	O					1.76
58.583	0.00	0.01	2.059	O					1.76
58.667	0.00	0.01	2.059	O					1.76
58.750	0.00	0.01	2.059	O					1.76
58.833	0.00	0.01	2.059	O					1.76
58.917	0.00	0.01	2.059	O					1.76
59.000	0.00	0.01	2.059	O					1.76
59.083	0.00	0.01	2.059	O					1.76
59.167	0.00	0.01	2.059	O					1.76
59.250	0.00	0.01	2.059	O					1.76
59.333	0.00	0.01	2.059	O					1.76
59.417	0.00	0.01	2.058	O					1.76
59.500	0.00	0.01	2.058	O					1.76
59.583	0.00	0.01	2.058	O					1.76
59.667	0.00	0.01	2.058	O					1.76
59.750	0.00	0.01	2.058	O					1.76
59.833	0.00	0.01	2.058	O					1.76
59.917	0.00	0.01	2.058	O					1.76

60.000	0.00	0.01	2.058	O				1.76
60.083	0.00	0.01	2.058	O				1.76
60.167	0.00	0.01	2.058	O				1.76
60.250	0.00	0.01	2.058	O				1.76
60.333	0.00	0.01	2.058	O				1.76
60.417	0.00	0.01	2.058	O				1.76
60.500	0.00	0.01	2.057	O				1.76
60.583	0.00	0.01	2.057	O				1.76
60.667	0.00	0.01	2.057	O				1.76
60.750	0.00	0.01	2.057	O				1.76
60.833	0.00	0.01	2.057	O				1.76
60.917	0.00	0.01	2.057	O				1.76
61.000	0.00	0.01	2.057	O				1.76
61.083	0.00	0.01	2.057	O				1.76
61.167	0.00	0.01	2.057	O				1.76
61.250	0.00	0.01	2.057	O				1.76
61.333	0.00	0.01	2.057	O				1.76
61.417	0.00	0.01	2.057	O				1.76
61.500	0.00	0.01	2.057	O				1.76
61.583	0.00	0.01	2.057	O				1.75
61.667	0.00	0.01	2.056	O				1.75
61.750	0.00	0.01	2.056	O				1.75
61.833	0.00	0.01	2.056	O				1.75
61.917	0.00	0.01	2.056	O				1.75
62.000	0.00	0.01	2.056	O				1.75
62.083	0.00	0.01	2.056	O				1.75
62.167	0.00	0.01	2.056	O				1.75
62.250	0.00	0.01	2.056	O				1.75
62.333	0.00	0.01	2.056	O				1.75
62.417	0.00	0.01	2.056	O				1.75
62.500	0.00	0.01	2.056	O				1.75
62.583	0.00	0.01	2.056	O				1.75
62.667	0.00	0.01	2.056	O				1.75
62.750	0.00	0.01	2.056	O				1.75
62.833	0.00	0.01	2.056	O				1.75
62.917	0.00	0.01	2.056	O				1.75
63.000	0.00	0.01	2.056	O				1.75
63.083	0.00	0.01	2.055	O				1.75
63.167	0.00	0.01	2.055	O				1.75
63.250	0.00	0.01	2.055	O				1.75
63.333	0.00	0.01	2.055	O				1.75
63.417	0.00	0.01	2.055	O				1.75
63.500	0.00	0.01	2.055	O				1.75
63.583	0.00	0.01	2.055	O				1.75
63.667	0.00	0.01	2.055	O				1.75
63.750	0.00	0.01	2.055	O				1.75
63.833	0.00	0.01	2.055	O				1.75
63.917	0.00	0.01	2.055	O				1.75
64.000	0.00	0.01	2.055	O				1.75
64.083	0.00	0.01	2.055	O				1.75
64.167	0.00	0.01	2.055	O				1.75
64.250	0.00	0.01	2.055	O				1.75
64.333	0.00	0.01	2.055	O				1.75
64.417	0.00	0.01	2.055	O				1.75
64.500	0.00	0.01	2.055	O				1.75
64.583	0.00	0.01	2.055	O				1.75
64.667	0.00	0.01	2.055	O				1.75
64.750	0.00	0.01	2.055	O				1.75
64.833	0.00	0.01	2.054	O				1.75
64.917	0.00	0.01	2.054	O				1.75
65.000	0.00	0.01	2.054	O				1.75
65.083	0.00	0.01	2.054	O				1.75
65.167	0.00	0.01	2.054	O				1.75
65.250	0.00	0.01	2.054	O				1.75
65.333	0.00	0.01	2.054	O				1.75
65.417	0.00	0.01	2.054	O				1.75
65.500	0.00	0.01	2.054	O				1.75
65.583	0.00	0.01	2.054	O				1.75
65.667	0.00	0.01	2.054	O				1.75
65.750	0.00	0.01	2.054	O				1.75
65.833	0.00	0.01	2.054	O				1.75
65.917	0.00	0.01	2.054	O				1.75
66.000	0.00	0.01	2.054	O				1.75
66.083	0.00	0.01	2.054	O				1.75
66.167	0.00	0.01	2.054	O				1.75
66.250	0.00	0.01	2.054	O				1.75
66.333	0.00	0.01	2.054	O				1.75
66.417	0.00	0.01	2.054	O				1.75
66.500	0.00	0.01	2.054	O				1.75
66.583	0.00	0.01	2.054	O				1.75
66.667	0.00	0.01	2.054	O				1.75
66.750	0.00	0.01	2.054	O				1.75
66.833	0.00	0.01	2.054	O				1.75
66.917	0.00	0.00	2.053	O				1.75
67.000	0.00	0.00	2.053	O				1.75
67.083	0.00	0.00	2.053	O				1.75
67.167	0.00	0.00	2.053	O				1.75
67.250	0.00	0.00	2.053	O				1.75
67.333	0.00	0.00	2.053	O				1.75
67.417	0.00	0.00	2.053	O				1.75
67.500	0.00	0.00	2.053	O				1.75
67.583	0.00	0.00	2.053	O				1.75
67.667	0.00	0.00	2.053	O				1.75
67.750	0.00	0.00	2.053	O				1.75
67.833	0.00	0.00	2.053	O				1.75
67.917	0.00	0.00	2.053	O				1.75
68.000	0.00	0.00	2.053	O				1.75
68.083	0.00	0.00	2.053	O				1.75
68.167	0.00	0.00	2.053	O				1.75

68.250	0.00	0.00	2.053	O				1.75
68.333	0.00	0.00	2.053	O				1.75
68.417	0.00	0.00	2.053	O				1.75
68.500	0.00	0.00	2.053	O				1.75
68.583	0.00	0.00	2.053	O				1.75
68.667	0.00	0.00	2.053	O				1.75
68.750	0.00	0.00	2.053	O				1.75
68.833	0.00	0.00	2.053	O				1.75
68.917	0.00	0.00	2.053	O				1.75
69.000	0.00	0.00	2.053	O				1.75
69.083	0.00	0.00	2.053	O				1.75
69.167	0.00	0.00	2.053	O				1.75
69.250	0.00	0.00	2.053	O				1.75
69.333	0.00	0.00	2.053	O				1.75
69.417	0.00	0.00	2.053	O				1.75
69.500	0.00	0.00	2.053	O				1.75
69.583	0.00	0.00	2.053	O				1.75
69.667	0.00	0.00	2.053	O				1.75
69.750	0.00	0.00	2.053	O				1.75
69.833	0.00	0.00	2.052	O				1.75
69.917	0.00	0.00	2.052	O				1.75
70.000	0.00	0.00	2.052	O				1.75
70.083	0.00	0.00	2.052	O				1.75
70.167	0.00	0.00	2.052	O				1.75
70.250	0.00	0.00	2.052	O				1.75
70.333	0.00	0.00	2.052	O				1.75
70.417	0.00	0.00	2.052	O				1.75
70.500	0.00	0.00	2.052	O				1.75
70.583	0.00	0.00	2.052	O				1.75
70.667	0.00	0.00	2.052	O				1.75
70.750	0.00	0.00	2.052	O				1.75
70.833	0.00	0.00	2.052	O				1.75
70.917	0.00	0.00	2.052	O				1.75
71.000	0.00	0.00	2.052	O				1.75
71.083	0.00	0.00	2.052	O				1.75
71.167	0.00	0.00	2.052	O				1.75
71.250	0.00	0.00	2.052	O				1.75
71.333	0.00	0.00	2.052	O				1.75
71.417	0.00	0.00	2.052	O				1.75
71.500	0.00	0.00	2.052	O				1.75
71.583	0.00	0.00	2.052	O				1.75
71.667	0.00	0.00	2.052	O				1.75
71.750	0.00	0.00	2.052	O				1.75
71.833	0.00	0.00	2.052	O				1.75
71.917	0.00	0.00	2.052	O				1.75
72.000	0.00	0.00	2.052	O				1.75
72.083	0.00	0.00	2.052	O				1.75
72.167	0.00	0.00	2.052	O				1.75
72.250	0.00	0.00	2.052	O				1.75
72.333	0.00	0.00	2.052	O				1.75
72.417	0.00	0.00	2.052	O				1.75
72.500	0.00	0.00	2.052	O				1.75
72.583	0.00	0.00	2.052	O				1.75
72.667	0.00	0.00	2.052	O				1.75
72.750	0.00	0.00	2.052	O				1.75
72.833	0.00	0.00	2.052	O				1.75
72.917	0.00	0.00	2.052	O				1.75
73.000	0.00	0.00	2.052	O				1.75
73.083	0.00	0.00	2.052	O				1.75
73.167	0.00	0.00	2.052	O				1.75
73.250	0.00	0.00	2.052	O				1.75
73.333	0.00	0.00	2.052	O				1.75
73.417	0.00	0.00	2.052	O				1.75
73.500	0.00	0.00	2.052	O				1.75
73.583	0.00	0.00	2.052	O				1.75
73.667	0.00	0.00	2.052	O				1.75
73.750	0.00	0.00	2.052	O				1.75
73.833	0.00	0.00	2.052	O				1.75
73.917	0.00	0.00	2.052	O				1.75
74.000	0.00	0.00	2.052	O				1.75
74.083	0.00	0.00	2.052	O				1.75
74.167	0.00	0.00	2.051	O				1.75
74.250	0.00	0.00	2.051	O				1.75
74.333	0.00	0.00	2.051	O				1.75
74.417	0.00	0.00	2.051	O				1.75
74.500	0.00	0.00	2.051	O				1.75
74.583	0.00	0.00	2.051	O				1.75
74.667	0.00	0.00	2.051	O				1.75
74.750	0.00	0.00	2.051	O				1.75
74.833	0.00	0.00	2.051	O				1.75
74.917	0.00	0.00	2.051	O				1.75
75.000	0.00	0.00	2.051	O				1.75
75.083	0.00	0.00	2.051	O				1.75
75.167	0.00	0.00	2.051	O				1.75
75.250	0.00	0.00	2.051	O				1.75
75.333	0.00	0.00	2.051	O				1.75
75.417	0.00	0.00	2.051	O				1.75
75.500	0.00	0.00	2.051	O				1.75
75.583	0.00	0.00	2.051	O				1.75
75.667	0.00	0.00	2.051	O				1.75
75.750	0.00	0.00	2.051	O				1.75
75.833	0.00	0.00	2.051	O				1.75
75.917	0.00	0.00	2.051	O				1.75
76.000	0.00	0.00	2.051	O				1.75
76.083	0.00	0.00	2.051	O				1.75
76.167	0.00	0.00	2.051	O				1.75
76.250	0.00	0.00	2.051	O				1.75
76.333	0.00	0.00	2.051	O				1.75
76.417	0.00	0.00	2.051	O				1.75

76.500	0.00	0.00	2.051	O					1.75
76.583	0.00	0.00	2.051	O					1.75
76.667	0.00	0.00	2.051	O					1.75
76.750	0.00	0.00	2.051	O					1.75
76.833	0.00	0.00	2.051	O					1.75
76.917	0.00	0.00	2.051	O					1.75
77.000	0.00	0.00	2.051	O					1.75
77.083	0.00	0.00	2.051	O					1.75
77.167	0.00	0.00	2.051	O					1.75
77.250	0.00	0.00	2.051	O					1.75
77.333	0.00	0.00	2.051	O					1.75
77.417	0.00	0.00	2.051	O					1.75
77.500	0.00	0.00	2.051	O					1.75
77.583	0.00	0.00	2.051	O					1.75
77.667	0.00	0.00	2.051	O					1.75
77.750	0.00	0.00	2.051	O					1.75
77.833	0.00	0.00	2.051	O					1.75
77.917	0.00	0.00	2.051	O					1.75
78.000	0.00	0.00	2.051	O					1.75
78.083	0.00	0.00	2.051	O					1.75
78.167	0.00	0.00	2.051	O					1.75
78.250	0.00	0.00	2.051	O					1.75
78.333	0.00	0.00	2.051	O					1.75
78.417	0.00	0.00	2.051	O					1.75
78.500	0.00	0.00	2.051	O					1.75
78.583	0.00	0.00	2.051	O					1.75
78.667	0.00	0.00	2.051	O					1.75
78.750	0.00	0.00	2.051	O					1.75
78.833	0.00	0.00	2.051	O					1.75
78.917	0.00	0.00	2.051	O					1.75
79.000	0.00	0.00	2.051	O					1.75
79.083	0.00	0.00	2.051	O					1.75
79.167	0.00	0.00	2.051	O					1.75
79.250	0.00	0.00	2.051	O					1.75
79.333	0.00	0.00	2.051	O					1.75
79.417	0.00	0.00	2.051	O					1.75
79.500	0.00	0.00	2.051	O					1.75
79.583	0.00	0.00	2.051	O					1.75
79.667	0.00	0.00	2.051	O					1.75
79.750	0.00	0.00	2.051	O					1.75
79.833	0.00	0.00	2.051	O					1.75
79.917	0.00	0.00	2.051	O					1.75
80.000	0.00	0.00	2.051	O					1.75
80.083	0.00	0.00	2.051	O					1.75
80.167	0.00	0.00	2.051	O					1.75
80.250	0.00	0.00	2.051	O					1.75
80.333	0.00	0.00	2.051	O					1.75
80.417	0.00	0.00	2.051	O					1.75
80.500	0.00	0.00	2.051	O					1.75
80.583	0.00	0.00	2.051	O					1.75

Remaining water in basin = 2.05 (Ac.Ft)

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

Number of intervals = 967
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 18.428 (CFS)
Total volume = 4.887 (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

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/23/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN A - NODES 300-353
MITIGATION ANALYSIS - 100-YEAR
24-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 2219PBAC24100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 292
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 26.941 (CFS)
Total volume = 14.855 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 292
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	1.100	0.000	1.100	1.100
1.750	2.050	0.000	2.050	2.050
2.000	2.380	0.470	2.378	2.382
2.750	3.480	0.950	3.477	3.483
3.000	3.860	8.620	3.830	3.890
4.000	5.540	18.330	5.477	5.603
5.000	7.410	24.390	7.326	7.494
5.500	8.430	26.920	8.337	8.523

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 6.7 13.47 20.21 26.94	Depth (Ft.)
0.083	0.53	0.00	0.002	O	0.00
0.167	1.14	0.00	0.008	OI	0.01
0.250	1.27	0.00	0.016	OI	0.01
0.333	1.59	0.00	0.026	OI	0.02
0.417	1.91	0.00	0.038	O I	0.03
0.500	1.98	0.00	0.051	O I	0.05
0.583	2.01	0.00	0.065	O I	0.06
0.667	2.02	0.00	0.079	O I	0.07
0.750	2.02	0.00	0.093	O I	0.08
0.833	2.28	0.00	0.107	O I	0.10
0.917	2.59	0.00	0.124	O I	0.11
1.000	2.65	0.00	0.142	O I	0.13
1.083	2.41	0.00	0.160	O I	0.15
1.167	2.12	0.00	0.175	O I	0.16
1.250	2.06	0.00	0.190	O I	0.17
1.333	2.03	0.00	0.204	O I	0.19
1.417	2.02	0.00	0.218	O I	0.20
1.500	2.02	0.00	0.232	O I	0.21
1.583	2.02	0.00	0.246	O I	0.22
1.667	2.02	0.00	0.259	O I	0.24
1.750	2.02	0.00	0.273	O I	0.25
1.833	2.28	0.00	0.288	O I	0.26
1.917	2.59	0.00	0.305	O I	0.28
2.000	2.65	0.00	0.323	O I	0.29
2.083	2.68	0.00	0.341	O I	0.31
2.167	2.69	0.00	0.360	O I	0.33

2.250	2.69	0.00	0.378	O I	0.34
2.333	2.69	0.00	0.397	O I	0.36
2.417	2.69	0.00	0.415	O I	0.38
2.500	2.69	0.00	0.434	O I	0.39
2.583	2.96	0.00	0.453	O I	0.41
2.667	3.26	0.00	0.475	O I	0.43
2.750	3.32	0.00	0.498	O I	0.45
2.833	3.35	0.00	0.520	O I	0.47
2.917	3.36	0.00	0.544	O I	0.49
3.000	3.36	0.00	0.567	O I	0.52
3.083	3.36	0.00	0.590	O I	0.54
3.167	3.36	0.00	0.613	O I	0.56
3.250	3.36	0.00	0.636	O I	0.58
3.333	3.36	0.00	0.659	O I	0.60
3.417	3.36	0.00	0.683	O I	0.62
3.500	3.36	0.00	0.706	O I	0.64
3.583	3.36	0.00	0.729	O I	0.66
3.667	3.36	0.00	0.752	O I	0.68
3.750	3.36	0.00	0.775	O I	0.70
3.833	3.63	0.00	0.799	O I	0.73
3.917	3.93	0.00	0.825	O I	0.75
4.000	4.00	0.00	0.853	O I	0.78
4.083	4.02	0.00	0.880	O I	0.80
4.167	4.04	0.00	0.908	O I	0.83
4.250	4.04	0.00	0.936	O I	0.85
4.333	4.30	0.00	0.965	O I	0.88
4.417	4.61	0.00	0.995	O I	0.90
4.500	4.67	0.00	1.027	O I	0.93
4.583	4.70	0.00	1.060	O I	0.96
4.667	4.71	0.00	1.092	O I	0.99
4.750	4.71	0.00	1.124	O I	1.02
4.833	4.98	0.00	1.158	O I	1.05
4.917	5.28	0.00	1.193	O I	1.07
5.000	5.34	0.00	1.230	O I	1.10
5.083	4.84	0.00	1.265	O I	1.13
5.167	4.25	0.00	1.296	O I	1.15
5.250	4.12	0.00	1.325	O I	1.18
5.333	4.33	0.00	1.354	O I	1.20
5.417	4.61	0.00	1.385	O I	1.22
5.500	4.67	0.00	1.417	O I	1.25
5.583	4.96	0.00	1.450	O I	1.28
5.667	5.28	0.00	1.485	O I	1.30
5.750	5.34	0.00	1.522	O I	1.33
5.833	5.37	0.00	1.559	O I	1.36
5.917	5.38	0.00	1.596	O I	1.39
6.000	5.38	0.00	1.633	O I	1.42
6.083	5.65	0.00	1.671	O I	1.45
6.167	5.95	0.00	1.711	O I	1.48
6.250	6.02	0.00	1.752	O I	1.51
6.333	6.04	0.00	1.793	O I	1.55
6.417	6.06	0.00	1.835	O I	1.58
6.500	6.06	0.00	1.877	O I	1.61
6.583	6.32	0.00	1.919	O I	1.65
6.667	6.62	0.00	1.964	O I	1.68
6.750	6.69	0.00	2.010	O I	1.72
6.833	6.72	0.01	2.056	O I	1.75
6.917	6.73	0.07	2.102	O I	1.79
7.000	6.73	0.14	2.148	O I	1.82
7.083	6.73	0.20	2.193	O I	1.86
7.167	6.73	0.27	2.237	O I	1.89
7.250	6.73	0.33	2.282	O I	1.93
7.333	6.99	0.39	2.326	O I	1.96
7.417	7.30	0.46	2.373	O I	1.99
7.500	7.36	0.49	2.420	O I	2.03
7.583	7.65	0.51	2.468	O I	2.06
7.667	7.97	0.53	2.518	O I	2.09
7.750	8.04	0.55	2.570	O I	2.13
7.833	8.33	0.58	2.622	O I	2.17
7.917	8.64	0.60	2.677	O I	2.20
8.000	8.71	0.62	2.732	O I	2.24
8.083	9.27	0.65	2.790	O I	2.28
8.167	9.88	0.68	2.851	O I	2.32
8.250	10.01	0.70	2.915	O I	2.36
8.333	10.07	0.73	2.979	O I	2.41
8.417	10.09	0.76	3.043	O I	2.45
8.500	10.09	0.79	3.108	O I	2.50
8.583	10.36	0.82	3.173	O I	2.54
8.667	10.66	0.84	3.239	O I	2.59
8.750	10.73	0.87	3.307	O I	2.63
8.833	11.02	0.90	3.376	O I	2.68
8.917	11.33	0.94	3.446	O I	2.73
9.000	11.40	1.67	3.516	O I	2.77
9.083	12.05	2.98	3.580	O I	2.82
9.167	12.78	4.20	3.641	O I	2.86
9.250	12.94	5.33	3.697	O I	2.89
9.333	13.37	6.35	3.747	O I	2.93
9.417	13.81	7.29	3.794	O I	2.96
9.500	13.91	8.14	3.836	O I	2.98
9.583	14.30	8.71	3.875	O I	3.01
9.667	14.73	8.94	3.915	O I	3.03
9.750	14.83	9.16	3.954	O I	3.06
9.833	15.23	9.39	3.994	O I	3.08
9.917	15.65	9.63	4.035	O I	3.10
10.000	15.76	9.87	4.076	O I	3.13
10.083	13.54	10.05	4.108	O I	3.15
10.167	10.99	10.14	4.123	O I	3.16
10.250	10.43	10.16	4.127	O	3.16
10.333	10.21	10.17	4.128	O	3.16
10.417	10.09	10.17	4.128	O I	3.16

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18.750	2.06	4.46	3.654	I O				2.86
18.833	1.77	4.13	3.638	I O				2.85
18.917	1.45	3.80	3.621	I O				2.84
19.000	1.39	3.49	3.606	I O				2.83
19.083	1.62	3.23	3.593	I O				2.82
19.167	1.91	3.04	3.584	IO				2.82
19.250	1.98	2.90	3.577	IO				2.81
19.333	2.27	2.80	3.572	IO				2.81
19.417	2.59	2.75	3.569	O				2.81
19.500	2.65	2.73	3.568	O				2.81
19.583	2.41	2.71	3.567	IO				2.81
19.667	2.12	2.65	3.564	IO				2.81
19.750	2.06	2.58	3.561	IO				2.80
19.833	1.77	2.49	3.556	O				2.80
19.917	1.45	2.38	3.551	IO				2.80
20.000	1.39	2.25	3.545	IO				2.79
20.083	1.62	2.16	3.540	IO				2.79
20.167	1.91	2.11	3.537	O				2.79
20.250	1.98	2.08	3.536	O				2.79
20.333	2.01	2.07	3.536	O				2.79
20.417	2.02	2.06	3.535	O				2.79
20.500	2.02	2.06	3.535	O				2.79
20.583	2.02	2.05	3.535	O				2.79
20.667	2.02	2.05	3.534	O				2.79
20.750	2.02	2.05	3.534	O				2.79
20.833	1.75	2.02	3.533	O				2.79
20.917	1.45	1.97	3.531	IO				2.78
21.000	1.39	1.90	3.527	IO				2.78
21.083	1.62	1.85	3.524	IO				2.78
21.167	1.91	1.84	3.524	O				2.78
21.250	1.98	1.85	3.525	O				2.78
21.333	1.74	1.85	3.525	O				2.78
21.417	1.45	1.82	3.523	IO				2.78
21.500	1.39	1.77	3.520	IO				2.78
21.583	1.62	1.73	3.519	IO				2.78
21.667	1.91	1.74	3.519	O				2.78
21.750	1.98	1.76	3.520	O				2.78
21.833	1.74	1.78	3.521	O				2.78
21.917	1.45	1.75	3.520	IO				2.78
22.000	1.39	1.71	3.518	IO				2.77
22.083	1.62	1.68	3.516	O				2.77
22.167	1.91	1.69	3.517	O				2.77
22.250	1.98	1.73	3.519	O				2.78
22.333	1.74	1.74	3.519	O				2.78
22.417	1.45	1.73	3.518	IO				2.78
22.500	1.39	1.69	3.516	IO				2.77
22.583	1.36	1.64	3.514	O				2.77
22.667	1.35	1.61	3.513	O				2.77
22.750	1.35	1.57	3.511	O				2.77
22.833	1.35	1.54	3.509	O				2.77
22.917	1.35	1.52	3.508	O				2.77
23.000	1.35	1.50	3.507	O				2.77
23.083	1.35	1.48	3.506	O				2.77
23.167	1.35	1.46	3.505	O				2.77
23.250	1.35	1.44	3.504	O				2.77
23.333	1.35	1.43	3.504	O				2.77
23.417	1.35	1.42	3.503	O				2.77
23.500	1.35	1.41	3.503	O				2.77
23.583	1.35	1.40	3.502	O				2.76
23.667	1.35	1.39	3.502	O				2.76
23.750	1.35	1.39	3.502	O				2.76
23.833	1.35	1.38	3.501	O				2.76
23.917	1.35	1.38	3.501	O				2.76
24.000	1.35	1.37	3.501	O				2.76
24.083	0.81	1.34	3.499	IO				2.76
24.167	0.21	1.23	3.494	IO				2.76
24.250	0.08	1.09	3.487	IO				2.75
24.333	0.03	0.95	3.480	IO				2.75
24.417	0.00	0.95	3.474	IO				2.75
24.500	0.00	0.94	3.467	IO				2.74
24.583	0.00	0.94	3.461	IO				2.74
24.667	0.00	0.94	3.454	IO				2.73
24.750	0.00	0.94	3.448	IO				2.73
24.833	0.00	0.93	3.441	IO				2.72
24.917	0.00	0.93	3.435	IO				2.72
25.000	0.00	0.93	3.429	IO				2.71
25.083	0.00	0.92	3.422	IO				2.71
25.167	0.00	0.92	3.416	IO				2.71
25.250	0.00	0.92	3.409	IO				2.70
25.333	0.00	0.92	3.403	IO				2.70
25.417	0.00	0.91	3.397	IO				2.69
25.500	0.00	0.91	3.391	IO				2.69
25.583	0.00	0.91	3.384	IO				2.68
25.667	0.00	0.91	3.378	IO				2.68
25.750	0.00	0.90	3.372	IO				2.68
25.833	0.00	0.90	3.366	IO				2.67
25.917	0.00	0.90	3.359	IO				2.67
26.000	0.00	0.89	3.353	IO				2.66
26.083	0.00	0.89	3.347	IO				2.66
26.167	0.00	0.89	3.341	IO				2.66
26.250	0.00	0.89	3.335	IO				2.65
26.333	0.00	0.88	3.329	IO				2.65
26.417	0.00	0.88	3.323	IO				2.64
26.500	0.00	0.88	3.317	IO				2.64
26.583	0.00	0.88	3.311	IO				2.63
26.667	0.00	0.87	3.305	IO				2.63
26.750	0.00	0.87	3.299	IO				2.63
26.833	0.00	0.87	3.293	IO				2.62
26.917	0.00	0.87	3.287	IO				2.62

27.000	0.00	0.86	3.281	IO				2.61
27.083	0.00	0.86	3.275	IO				2.61
27.167	0.00	0.86	3.269	IO				2.61
27.250	0.00	0.86	3.263	IO				2.60
27.333	0.00	0.85	3.257	IO				2.60
27.417	0.00	0.85	3.251	IO				2.59
27.500	0.00	0.85	3.245	IO				2.59
27.583	0.00	0.85	3.239	IO				2.59
27.667	0.00	0.84	3.234	IO				2.58
27.750	0.00	0.84	3.228	O				2.58
27.833	0.00	0.84	3.222	O				2.57
27.917	0.00	0.83	3.216	O				2.57
28.000	0.00	0.83	3.211	O				2.57
28.083	0.00	0.83	3.205	O				2.56
28.167	0.00	0.83	3.199	O				2.56
28.250	0.00	0.82	3.193	O				2.55
28.333	0.00	0.82	3.188	O				2.55
28.417	0.00	0.82	3.182	O				2.55
28.500	0.00	0.82	3.176	O				2.54
28.583	0.00	0.82	3.171	O				2.54
28.667	0.00	0.81	3.165	O				2.54
28.750	0.00	0.81	3.160	O				2.53
28.833	0.00	0.81	3.154	O				2.53
28.917	0.00	0.81	3.149	O				2.52
29.000	0.00	0.80	3.143	O				2.52
29.083	0.00	0.80	3.137	O				2.52
29.167	0.00	0.80	3.132	O				2.51
29.250	0.00	0.80	3.126	O				2.51
29.333	0.00	0.79	3.121	O				2.51
29.417	0.00	0.79	3.116	O				2.50
29.500	0.00	0.79	3.110	O				2.50
29.583	0.00	0.79	3.105	O				2.49
29.667	0.00	0.78	3.099	O				2.49
29.750	0.00	0.78	3.094	O				2.49
29.833	0.00	0.78	3.089	O				2.48
29.917	0.00	0.78	3.083	O				2.48
30.000	0.00	0.77	3.078	O				2.48
30.083	0.00	0.77	3.072	O				2.47
30.167	0.00	0.77	3.067	O				2.47
30.250	0.00	0.77	3.062	O				2.46
30.333	0.00	0.77	3.057	O				2.46
30.417	0.00	0.76	3.051	O				2.46
30.500	0.00	0.76	3.046	O				2.45
30.583	0.00	0.76	3.041	O				2.45
30.667	0.00	0.76	3.036	O				2.45
30.750	0.00	0.75	3.030	O				2.44
30.833	0.00	0.75	3.025	O				2.44
30.917	0.00	0.75	3.020	O				2.44
31.000	0.00	0.75	3.015	O				2.43
31.083	0.00	0.74	3.010	O				2.43
31.167	0.00	0.74	3.005	O				2.43
31.250	0.00	0.74	3.000	O				2.42
31.333	0.00	0.74	2.994	O				2.42
31.417	0.00	0.74	2.989	O				2.42
31.500	0.00	0.73	2.984	O				2.41
31.583	0.00	0.73	2.979	O				2.41
31.667	0.00	0.73	2.974	O				2.41
31.750	0.00	0.73	2.969	O				2.40
31.833	0.00	0.72	2.964	O				2.40
31.917	0.00	0.72	2.959	O				2.39
32.000	0.00	0.72	2.954	O				2.39
32.083	0.00	0.72	2.949	O				2.39
32.167	0.00	0.72	2.944	O				2.38
32.250	0.00	0.71	2.939	O				2.38
32.333	0.00	0.71	2.935	O				2.38
32.417	0.00	0.71	2.930	O				2.37
32.500	0.00	0.71	2.925	O				2.37
32.583	0.00	0.71	2.920	O				2.37
32.667	0.00	0.70	2.915	O				2.36
32.750	0.00	0.70	2.910	O				2.36
32.833	0.00	0.70	2.905	O				2.36
32.917	0.00	0.70	2.901	O				2.35
33.000	0.00	0.70	2.896	O				2.35
33.083	0.00	0.69	2.891	O				2.35
33.167	0.00	0.69	2.886	O				2.35
33.250	0.00	0.69	2.882	O				2.34
33.333	0.00	0.69	2.877	O				2.34
33.417	0.00	0.68	2.872	O				2.34
33.500	0.00	0.68	2.867	O				2.33
33.583	0.00	0.68	2.863	O				2.33
33.667	0.00	0.68	2.858	O				2.33
33.750	0.00	0.68	2.853	O				2.32
33.833	0.00	0.67	2.849	O				2.32
33.917	0.00	0.67	2.844	O				2.32
34.000	0.00	0.67	2.839	O				2.31
34.083	0.00	0.67	2.835	O				2.31
34.167	0.00	0.67	2.830	O				2.31
34.250	0.00	0.66	2.826	O				2.30
34.333	0.00	0.66	2.821	O				2.30
34.417	0.00	0.66	2.816	O				2.30
34.500	0.00	0.66	2.812	O				2.29
34.583	0.00	0.66	2.807	O				2.29
34.667	0.00	0.65	2.803	O				2.29
34.750	0.00	0.65	2.798	O				2.29
34.833	0.00	0.65	2.794	O				2.28
34.917	0.00	0.65	2.789	O				2.28
35.000	0.00	0.65	2.785	O				2.28
35.083	0.00	0.64	2.781	O				2.27
35.167	0.00	0.64	2.776	O				2.27

35.250	0.00	0.64	2.772	O				2.27
35.333	0.00	0.64	2.767	O				2.26
35.417	0.00	0.64	2.763	O				2.26
35.500	0.00	0.64	2.758	O				2.26
35.583	0.00	0.63	2.754	O				2.26
35.667	0.00	0.63	2.750	O				2.25
35.750	0.00	0.63	2.745	O				2.25
35.833	0.00	0.63	2.741	O				2.25
35.917	0.00	0.63	2.737	O				2.24
36.000	0.00	0.62	2.732	O				2.24
36.083	0.00	0.62	2.728	O				2.24
36.167	0.00	0.62	2.724	O				2.23
36.250	0.00	0.62	2.720	O				2.23
36.333	0.00	0.62	2.715	O				2.23
36.417	0.00	0.61	2.711	O				2.23
36.500	0.00	0.61	2.707	O				2.22
36.583	0.00	0.61	2.703	O				2.22
36.667	0.00	0.61	2.699	O				2.22
36.750	0.00	0.61	2.694	O				2.21
36.833	0.00	0.61	2.690	O				2.21
36.917	0.00	0.60	2.686	O				2.21
37.000	0.00	0.60	2.682	O				2.21
37.083	0.00	0.60	2.678	O				2.20
37.167	0.00	0.60	2.674	O				2.20
37.250	0.00	0.60	2.669	O				2.20
37.333	0.00	0.59	2.665	O				2.19
37.417	0.00	0.59	2.661	O				2.19
37.500	0.00	0.59	2.657	O				2.19
37.583	0.00	0.59	2.653	O				2.19
37.667	0.00	0.59	2.649	O				2.18
37.750	0.00	0.59	2.645	O				2.18
37.833	0.00	0.58	2.641	O				2.18
37.917	0.00	0.58	2.637	O				2.18
38.000	0.00	0.58	2.633	O				2.17
38.083	0.00	0.58	2.629	O				2.17
38.167	0.00	0.58	2.625	O				2.17
38.250	0.00	0.58	2.621	O				2.16
38.333	0.00	0.57	2.617	O				2.16
38.417	0.00	0.57	2.613	O				2.16
38.500	0.00	0.57	2.609	O				2.16
38.583	0.00	0.57	2.605	O				2.15
38.667	0.00	0.57	2.601	O				2.15
38.750	0.00	0.56	2.598	O				2.15
38.833	0.00	0.56	2.594	O				2.15
38.917	0.00	0.56	2.590	O				2.14
39.000	0.00	0.56	2.586	O				2.14
39.083	0.00	0.56	2.582	O				2.14
39.167	0.00	0.56	2.578	O				2.14
39.250	0.00	0.55	2.574	O				2.13
39.333	0.00	0.55	2.571	O				2.13
39.417	0.00	0.55	2.567	O				2.13
39.500	0.00	0.55	2.563	O				2.12
39.583	0.00	0.55	2.559	O				2.12
39.667	0.00	0.55	2.555	O				2.12
39.750	0.00	0.54	2.552	O				2.12
39.833	0.00	0.54	2.548	O				2.11
39.917	0.00	0.54	2.544	O				2.11
40.000	0.00	0.54	2.540	O				2.11
40.083	0.00	0.54	2.537	O				2.11
40.167	0.00	0.54	2.533	O				2.10
40.250	0.00	0.54	2.529	O				2.10
40.333	0.00	0.53	2.526	O				2.10
40.417	0.00	0.53	2.522	O				2.10
40.500	0.00	0.53	2.518	O				2.09
40.583	0.00	0.53	2.515	O				2.09
40.667	0.00	0.53	2.511	O				2.09
40.750	0.00	0.53	2.507	O				2.09
40.833	0.00	0.52	2.504	O				2.08
40.917	0.00	0.52	2.500	O				2.08
41.000	0.00	0.52	2.497	O				2.08
41.083	0.00	0.52	2.493	O				2.08
41.167	0.00	0.52	2.489	O				2.07
41.250	0.00	0.52	2.486	O				2.07
41.333	0.00	0.51	2.482	O				2.07
41.417	0.00	0.51	2.479	O				2.07
41.500	0.00	0.51	2.475	O				2.06
41.583	0.00	0.51	2.472	O				2.06
41.667	0.00	0.51	2.468	O				2.06
41.750	0.00	0.51	2.465	O				2.06
41.833	0.00	0.51	2.461	O				2.06
41.917	0.00	0.50	2.458	O				2.05
42.000	0.00	0.50	2.454	O				2.05
42.083	0.00	0.50	2.451	O				2.05
42.167	0.00	0.50	2.447	O				2.05
42.250	0.00	0.50	2.444	O				2.04
42.333	0.00	0.50	2.441	O				2.04
42.417	0.00	0.49	2.437	O				2.04
42.500	0.00	0.49	2.434	O				2.04
42.583	0.00	0.49	2.430	O				2.03
42.667	0.00	0.49	2.427	O				2.03
42.750	0.00	0.49	2.424	O				2.03
42.833	0.00	0.49	2.420	O				2.03
42.917	0.00	0.49	2.417	O				2.03
43.000	0.00	0.48	2.414	O				2.02
43.083	0.00	0.48	2.410	O				2.02
43.167	0.00	0.48	2.407	O				2.02
43.250	0.00	0.48	2.404	O				2.02
43.333	0.00	0.48	2.400	O				2.01
43.417	0.00	0.48	2.397	O				2.01

43.500	0.00	0.48	2.394	O					2.01
43.583	0.00	0.47	2.390	O					2.01
43.667	0.00	0.47	2.387	O					2.00
43.750	0.00	0.47	2.384	O					2.00
43.833	0.00	0.47	2.381	O					2.00
43.917	0.00	0.47	2.377	O					2.00
44.000	0.00	0.46	2.374	O					2.00
44.083	0.00	0.46	2.371	O					1.99
44.167	0.00	0.45	2.368	O					1.99
44.250	0.00	0.45	2.365	O					1.99
44.333	0.00	0.44	2.362	O					1.99
44.417	0.00	0.44	2.359	O					1.98
44.500	0.00	0.44	2.356	O					1.98
44.583	0.00	0.43	2.353	O					1.98
44.667	0.00	0.43	2.350	O					1.98
44.750	0.00	0.42	2.347	O					1.97
44.833	0.00	0.42	2.344	O					1.97
44.917	0.00	0.41	2.341	O					1.97
45.000	0.00	0.41	2.338	O					1.97
45.083	0.00	0.41	2.335	O					1.97
45.167	0.00	0.40	2.333	O					1.96
45.250	0.00	0.40	2.330	O					1.96
45.333	0.00	0.39	2.327	O					1.96
45.417	0.00	0.39	2.324	O					1.96
45.500	0.00	0.39	2.322	O					1.96
45.583	0.00	0.38	2.319	O					1.95
45.667	0.00	0.38	2.316	O					1.95
45.750	0.00	0.38	2.314	O					1.95
45.833	0.00	0.37	2.311	O					1.95
45.917	0.00	0.37	2.309	O					1.95
46.000	0.00	0.36	2.306	O					1.94
46.083	0.00	0.36	2.304	O					1.94
46.167	0.00	0.36	2.301	O					1.94
46.250	0.00	0.35	2.299	O					1.94
46.333	0.00	0.35	2.296	O					1.94
46.417	0.00	0.35	2.294	O					1.93
46.500	0.00	0.34	2.292	O					1.93
46.583	0.00	0.34	2.289	O					1.93
46.667	0.00	0.34	2.287	O					1.93
46.750	0.00	0.33	2.285	O					1.93
46.833	0.00	0.33	2.282	O					1.93
46.917	0.00	0.33	2.280	O					1.92
47.000	0.00	0.32	2.278	O					1.92
47.083	0.00	0.32	2.276	O					1.92
47.167	0.00	0.32	2.273	O					1.92
47.250	0.00	0.32	2.271	O					1.92
47.333	0.00	0.31	2.269	O					1.92
47.417	0.00	0.31	2.267	O					1.91
47.500	0.00	0.31	2.265	O					1.91
47.583	0.00	0.30	2.263	O					1.91
47.667	0.00	0.30	2.261	O					1.91
47.750	0.00	0.30	2.259	O					1.91
47.833	0.00	0.29	2.256	O					1.91
47.917	0.00	0.29	2.254	O					1.90
48.000	0.00	0.29	2.252	O					1.90
48.083	0.00	0.29	2.251	O					1.90
48.167	0.00	0.28	2.249	O					1.90
48.250	0.00	0.28	2.247	O					1.90
48.333	0.00	0.28	2.245	O					1.90
48.417	0.00	0.27	2.243	O					1.90
48.500	0.00	0.27	2.241	O					1.89
48.583	0.00	0.27	2.239	O					1.89
48.667	0.00	0.27	2.237	O					1.89
48.750	0.00	0.26	2.235	O					1.89
48.833	0.00	0.26	2.234	O					1.89
48.917	0.00	0.26	2.232	O					1.89
49.000	0.00	0.26	2.230	O					1.89
49.083	0.00	0.25	2.228	O					1.89
49.167	0.00	0.25	2.227	O					1.88
49.250	0.00	0.25	2.225	O					1.88
49.333	0.00	0.25	2.223	O					1.88
49.417	0.00	0.24	2.221	O					1.88
49.500	0.00	0.24	2.220	O					1.88
49.583	0.00	0.24	2.218	O					1.88
49.667	0.00	0.24	2.216	O					1.88
49.750	0.00	0.23	2.215	O					1.87
49.833	0.00	0.23	2.213	O					1.87
49.917	0.00	0.23	2.212	O					1.87
50.000	0.00	0.23	2.210	O					1.87
50.083	0.00	0.23	2.208	O					1.87
50.167	0.00	0.22	2.207	O					1.87
50.250	0.00	0.22	2.205	O					1.87
50.333	0.00	0.22	2.204	O					1.87
50.417	0.00	0.22	2.202	O					1.87
50.500	0.00	0.21	2.201	O					1.86
50.583	0.00	0.21	2.199	O					1.86
50.667	0.00	0.21	2.198	O					1.86
50.750	0.00	0.21	2.196	O					1.86
50.833	0.00	0.21	2.195	O					1.86
50.917	0.00	0.20	2.194	O					1.86
51.000	0.00	0.20	2.192	O					1.86
51.083	0.00	0.20	2.191	O					1.86
51.167	0.00	0.20	2.189	O					1.86
51.250	0.00	0.20	2.188	O					1.85
51.333	0.00	0.19	2.187	O					1.85
51.417	0.00	0.19	2.185	O					1.85
51.500	0.00	0.19	2.184	O					1.85
51.583	0.00	0.19	2.183	O					1.85
51.667	0.00	0.19	2.182	O					1.85

51.750	0.00	0.19	2.180	O				1.85
51.833	0.00	0.18	2.179	O				1.85
51.917	0.00	0.18	2.178	O				1.85
52.000	0.00	0.18	2.176	O				1.85
52.083	0.00	0.18	2.175	O				1.84
52.167	0.00	0.18	2.174	O				1.84
52.250	0.00	0.17	2.173	O				1.84
52.333	0.00	0.17	2.172	O				1.84
52.417	0.00	0.17	2.170	O				1.84
52.500	0.00	0.17	2.169	O				1.84
52.583	0.00	0.17	2.168	O				1.84
52.667	0.00	0.17	2.167	O				1.84
52.750	0.00	0.16	2.166	O				1.84
52.833	0.00	0.16	2.165	O				1.84
52.917	0.00	0.16	2.164	O				1.84
53.000	0.00	0.16	2.162	O				1.84
53.083	0.00	0.16	2.161	O				1.83
53.167	0.00	0.16	2.160	O				1.83
53.250	0.00	0.16	2.159	O				1.83
53.333	0.00	0.15	2.158	O				1.83
53.417	0.00	0.15	2.157	O				1.83
53.500	0.00	0.15	2.156	O				1.83
53.583	0.00	0.15	2.155	O				1.83
53.667	0.00	0.15	2.154	O				1.83
53.750	0.00	0.15	2.153	O				1.83
53.833	0.00	0.15	2.152	O				1.83
53.917	0.00	0.14	2.151	O				1.83
54.000	0.00	0.14	2.150	O				1.83
54.083	0.00	0.14	2.149	O				1.82
54.167	0.00	0.14	2.148	O				1.82
54.250	0.00	0.14	2.147	O				1.82
54.333	0.00	0.14	2.146	O				1.82
54.417	0.00	0.14	2.145	O				1.82
54.500	0.00	0.13	2.144	O				1.82
54.583	0.00	0.13	2.143	O				1.82
54.667	0.00	0.13	2.142	O				1.82
54.750	0.00	0.13	2.141	O				1.82
54.833	0.00	0.13	2.141	O				1.82
54.917	0.00	0.13	2.140	O				1.82
55.000	0.00	0.13	2.139	O				1.82
55.083	0.00	0.13	2.138	O				1.82
55.167	0.00	0.12	2.137	O				1.82
55.250	0.00	0.12	2.136	O				1.82
55.333	0.00	0.12	2.135	O				1.81
55.417	0.00	0.12	2.135	O				1.81
55.500	0.00	0.12	2.134	O				1.81
55.583	0.00	0.12	2.133	O				1.81
55.667	0.00	0.12	2.132	O				1.81
55.750	0.00	0.12	2.131	O				1.81
55.833	0.00	0.11	2.131	O				1.81
55.917	0.00	0.11	2.130	O				1.81
56.000	0.00	0.11	2.129	O				1.81
56.083	0.00	0.11	2.128	O				1.81
56.167	0.00	0.11	2.127	O				1.81
56.250	0.00	0.11	2.127	O				1.81
56.333	0.00	0.11	2.126	O				1.81
56.417	0.00	0.11	2.125	O				1.81
56.500	0.00	0.11	2.124	O				1.81
56.583	0.00	0.11	2.124	O				1.81
56.667	0.00	0.10	2.123	O				1.81
56.750	0.00	0.10	2.122	O				1.80
56.833	0.00	0.10	2.122	O				1.80
56.917	0.00	0.10	2.121	O				1.80
57.000	0.00	0.10	2.120	O				1.80
57.083	0.00	0.10	2.120	O				1.80
57.167	0.00	0.10	2.119	O				1.80
57.250	0.00	0.10	2.118	O				1.80
57.333	0.00	0.10	2.117	O				1.80
57.417	0.00	0.10	2.117	O				1.80
57.500	0.00	0.09	2.116	O				1.80
57.583	0.00	0.09	2.116	O				1.80
57.667	0.00	0.09	2.115	O				1.80
57.750	0.00	0.09	2.114	O				1.80
57.833	0.00	0.09	2.114	O				1.80
57.917	0.00	0.09	2.113	O				1.80
58.000	0.00	0.09	2.112	O				1.80
58.083	0.00	0.09	2.112	O				1.80
58.167	0.00	0.09	2.111	O				1.80
58.250	0.00	0.09	2.111	O				1.80
58.333	0.00	0.09	2.110	O				1.80
58.417	0.00	0.08	2.109	O				1.80
58.500	0.00	0.08	2.109	O				1.79
58.583	0.00	0.08	2.108	O				1.79
58.667	0.00	0.08	2.108	O				1.79
58.750	0.00	0.08	2.107	O				1.79
58.833	0.00	0.08	2.107	O				1.79
58.917	0.00	0.08	2.106	O				1.79
59.000	0.00	0.08	2.105	O				1.79
59.083	0.00	0.08	2.105	O				1.79
59.167	0.00	0.08	2.104	O				1.79
59.250	0.00	0.08	2.104	O				1.79
59.333	0.00	0.08	2.103	O				1.79
59.417	0.00	0.08	2.103	O				1.79
59.500	0.00	0.07	2.102	O				1.79
59.583	0.00	0.07	2.102	O				1.79
59.667	0.00	0.07	2.101	O				1.79
59.750	0.00	0.07	2.101	O				1.79
59.833	0.00	0.07	2.100	O				1.79
59.917	0.00	0.07	2.100	O				1.79

60.000	0.00	0.07	2.099	O				1.79
60.083	0.00	0.07	2.099	O				1.79
60.167	0.00	0.07	2.098	O				1.79
60.250	0.00	0.07	2.098	O				1.79
60.333	0.00	0.07	2.097	O				1.79
60.417	0.00	0.07	2.097	O				1.79
60.500	0.00	0.07	2.096	O				1.79
60.583	0.00	0.07	2.096	O				1.78
60.667	0.00	0.06	2.096	O				1.78
60.750	0.00	0.06	2.095	O				1.78
60.833	0.00	0.06	2.095	O				1.78
60.917	0.00	0.06	2.094	O				1.78
61.000	0.00	0.06	2.094	O				1.78
61.083	0.00	0.06	2.093	O				1.78
61.167	0.00	0.06	2.093	O				1.78
61.250	0.00	0.06	2.093	O				1.78
61.333	0.00	0.06	2.092	O				1.78
61.417	0.00	0.06	2.092	O				1.78
61.500	0.00	0.06	2.091	O				1.78
61.583	0.00	0.06	2.091	O				1.78
61.667	0.00	0.06	2.091	O				1.78
61.750	0.00	0.06	2.090	O				1.78
61.833	0.00	0.06	2.090	O				1.78
61.917	0.00	0.06	2.089	O				1.78
62.000	0.00	0.06	2.089	O				1.78
62.083	0.00	0.05	2.089	O				1.78
62.167	0.00	0.05	2.088	O				1.78
62.250	0.00	0.05	2.088	O				1.78
62.333	0.00	0.05	2.087	O				1.78
62.417	0.00	0.05	2.087	O				1.78
62.500	0.00	0.05	2.087	O				1.78
62.583	0.00	0.05	2.086	O				1.78
62.667	0.00	0.05	2.086	O				1.78
62.750	0.00	0.05	2.086	O				1.78
62.833	0.00	0.05	2.085	O				1.78
62.917	0.00	0.05	2.085	O				1.78
63.000	0.00	0.05	2.085	O				1.78
63.083	0.00	0.05	2.084	O				1.78
63.167	0.00	0.05	2.084	O				1.78
63.250	0.00	0.05	2.084	O				1.78
63.333	0.00	0.05	2.083	O				1.78
63.417	0.00	0.05	2.083	O				1.77
63.500	0.00	0.05	2.083	O				1.77
63.583	0.00	0.05	2.082	O				1.77
63.667	0.00	0.05	2.082	O				1.77
63.750	0.00	0.05	2.082	O				1.77
63.833	0.00	0.04	2.081	O				1.77
63.917	0.00	0.04	2.081	O				1.77
64.000	0.00	0.04	2.081	O				1.77
64.083	0.00	0.04	2.080	O				1.77
64.167	0.00	0.04	2.080	O				1.77
64.250	0.00	0.04	2.080	O				1.77
64.333	0.00	0.04	2.080	O				1.77
64.417	0.00	0.04	2.079	O				1.77
64.500	0.00	0.04	2.079	O				1.77
64.583	0.00	0.04	2.079	O				1.77
64.667	0.00	0.04	2.078	O				1.77
64.750	0.00	0.04	2.078	O				1.77
64.833	0.00	0.04	2.078	O				1.77
64.917	0.00	0.04	2.078	O				1.77
65.000	0.00	0.04	2.077	O				1.77
65.083	0.00	0.04	2.077	O				1.77
65.167	0.00	0.04	2.077	O				1.77
65.250	0.00	0.04	2.077	O				1.77
65.333	0.00	0.04	2.076	O				1.77
65.417	0.00	0.04	2.076	O				1.77
65.500	0.00	0.04	2.076	O				1.77
65.583	0.00	0.04	2.076	O				1.77
65.667	0.00	0.04	2.075	O				1.77
65.750	0.00	0.04	2.075	O				1.77
65.833	0.00	0.04	2.075	O				1.77
65.917	0.00	0.04	2.075	O				1.77
66.000	0.00	0.03	2.074	O				1.77
66.083	0.00	0.03	2.074	O				1.77
66.167	0.00	0.03	2.074	O				1.77
66.250	0.00	0.03	2.074	O				1.77
66.333	0.00	0.03	2.073	O				1.77
66.417	0.00	0.03	2.073	O				1.77
66.500	0.00	0.03	2.073	O				1.77
66.583	0.00	0.03	2.073	O				1.77
66.667	0.00	0.03	2.072	O				1.77
66.750	0.00	0.03	2.072	O				1.77
66.833	0.00	0.03	2.072	O				1.77
66.917	0.00	0.03	2.072	O				1.77
67.000	0.00	0.03	2.072	O				1.77
67.083	0.00	0.03	2.071	O				1.77
67.167	0.00	0.03	2.071	O				1.77
67.250	0.00	0.03	2.071	O				1.77
67.333	0.00	0.03	2.071	O				1.77
67.417	0.00	0.03	2.071	O				1.77
67.500	0.00	0.03	2.070	O				1.77
67.583	0.00	0.03	2.070	O				1.77
67.667	0.00	0.03	2.070	O				1.77
67.750	0.00	0.03	2.070	O				1.77
67.833	0.00	0.03	2.070	O				1.76
67.917	0.00	0.03	2.069	O				1.76
68.000	0.00	0.03	2.069	O				1.76
68.083	0.00	0.03	2.069	O				1.76
68.167	0.00	0.03	2.069	O				1.76

68.250	0.00	0.03	2.069	O					1.76
68.333	0.00	0.03	2.068	O					1.76
68.417	0.00	0.03	2.068	O					1.76
68.500	0.00	0.03	2.068	O					1.76
68.583	0.00	0.03	2.068	O					1.76
68.667	0.00	0.03	2.068	O					1.76
68.750	0.00	0.03	2.068	O					1.76
68.833	0.00	0.02	2.067	O					1.76
68.917	0.00	0.02	2.067	O					1.76
69.000	0.00	0.02	2.067	O					1.76
69.083	0.00	0.02	2.067	O					1.76
69.167	0.00	0.02	2.067	O					1.76
69.250	0.00	0.02	2.067	O					1.76
69.333	0.00	0.02	2.066	O					1.76
69.417	0.00	0.02	2.066	O					1.76
69.500	0.00	0.02	2.066	O					1.76
69.583	0.00	0.02	2.066	O					1.76
69.667	0.00	0.02	2.066	O					1.76
69.750	0.00	0.02	2.066	O					1.76
69.833	0.00	0.02	2.065	O					1.76
69.917	0.00	0.02	2.065	O					1.76
70.000	0.00	0.02	2.065	O					1.76
70.083	0.00	0.02	2.065	O					1.76
70.167	0.00	0.02	2.065	O					1.76
70.250	0.00	0.02	2.065	O					1.76
70.333	0.00	0.02	2.065	O					1.76
70.417	0.00	0.02	2.064	O					1.76
70.500	0.00	0.02	2.064	O					1.76
70.583	0.00	0.02	2.064	O					1.76
70.667	0.00	0.02	2.064	O					1.76
70.750	0.00	0.02	2.064	O					1.76
70.833	0.00	0.02	2.064	O					1.76
70.917	0.00	0.02	2.064	O					1.76
71.000	0.00	0.02	2.064	O					1.76
71.083	0.00	0.02	2.063	O					1.76
71.167	0.00	0.02	2.063	O					1.76
71.250	0.00	0.02	2.063	O					1.76
71.333	0.00	0.02	2.063	O					1.76
71.417	0.00	0.02	2.063	O					1.76
71.500	0.00	0.02	2.063	O					1.76
71.583	0.00	0.02	2.063	O					1.76
71.667	0.00	0.02	2.062	O					1.76
71.750	0.00	0.02	2.062	O					1.76
71.833	0.00	0.02	2.062	O					1.76
71.917	0.00	0.02	2.062	O					1.76
72.000	0.00	0.02	2.062	O					1.76
72.083	0.00	0.02	2.062	O					1.76
72.167	0.00	0.02	2.062	O					1.76
72.250	0.00	0.02	2.062	O					1.76
72.333	0.00	0.02	2.062	O					1.76
72.417	0.00	0.02	2.061	O					1.76
72.500	0.00	0.02	2.061	O					1.76
72.583	0.00	0.02	2.061	O					1.76
72.667	0.00	0.02	2.061	O					1.76
72.750	0.00	0.02	2.061	O					1.76
72.833	0.00	0.02	2.061	O					1.76
72.917	0.00	0.02	2.061	O					1.76
73.000	0.00	0.02	2.061	O					1.76
73.083	0.00	0.02	2.061	O					1.76
73.167	0.00	0.01	2.060	O					1.76
73.250	0.00	0.01	2.060	O					1.76
73.333	0.00	0.01	2.060	O					1.76
73.417	0.00	0.01	2.060	O					1.76
73.500	0.00	0.01	2.060	O					1.76
73.583	0.00	0.01	2.060	O					1.76
73.667	0.00	0.01	2.060	O					1.76
73.750	0.00	0.01	2.060	O					1.76
73.833	0.00	0.01	2.060	O					1.76
73.917	0.00	0.01	2.060	O					1.76
74.000	0.00	0.01	2.059	O					1.76
74.083	0.00	0.01	2.059	O					1.76
74.167	0.00	0.01	2.059	O					1.76
74.250	0.00	0.01	2.059	O					1.76
74.333	0.00	0.01	2.059	O					1.76
74.417	0.00	0.01	2.059	O					1.76
74.500	0.00	0.01	2.059	O					1.76
74.583	0.00	0.01	2.059	O					1.76
74.667	0.00	0.01	2.059	O					1.76
74.750	0.00	0.01	2.059	O					1.76
74.833	0.00	0.01	2.059	O					1.76
74.917	0.00	0.01	2.059	O					1.76
75.000	0.00	0.01	2.058	O					1.76
75.083	0.00	0.01	2.058	O					1.76
75.167	0.00	0.01	2.058	O					1.76
75.250	0.00	0.01	2.058	O					1.76
75.333	0.00	0.01	2.058	O					1.76
75.417	0.00	0.01	2.058	O					1.76
75.500	0.00	0.01	2.058	O					1.76
75.583	0.00	0.01	2.058	O					1.76
75.667	0.00	0.01	2.058	O					1.76
75.750	0.00	0.01	2.058	O					1.76
75.833	0.00	0.01	2.058	O					1.76
75.917	0.00	0.01	2.058	O					1.76
76.000	0.00	0.01	2.057	O					1.76
76.083	0.00	0.01	2.057	O					1.76
76.167	0.00	0.01	2.057	O					1.76
76.250	0.00	0.01	2.057	O					1.76
76.333	0.00	0.01	2.057	O					1.76
76.417	0.00	0.01	2.057	O					1.76

76.500	0.00	0.01	2.057	O				1.76
76.583	0.00	0.01	2.057	O				1.76
76.667	0.00	0.01	2.057	O				1.76
76.750	0.00	0.01	2.057	O				1.76
76.833	0.00	0.01	2.057	O				1.76
76.917	0.00	0.01	2.057	O				1.76
77.000	0.00	0.01	2.057	O				1.76
77.083	0.00	0.01	2.057	O				1.76
77.167	0.00	0.01	2.057	O				1.75
77.250	0.00	0.01	2.056	O				1.75
77.333	0.00	0.01	2.056	O				1.75
77.417	0.00	0.01	2.056	O				1.75
77.500	0.00	0.01	2.056	O				1.75
77.583	0.00	0.01	2.056	O				1.75
77.667	0.00	0.01	2.056	O				1.75
77.750	0.00	0.01	2.056	O				1.75
77.833	0.00	0.01	2.056	O				1.75
77.917	0.00	0.01	2.056	O				1.75
78.000	0.00	0.01	2.056	O				1.75
78.083	0.00	0.01	2.056	O				1.75
78.167	0.00	0.01	2.056	O				1.75
78.250	0.00	0.01	2.056	O				1.75
78.333	0.00	0.01	2.056	O				1.75
78.417	0.00	0.01	2.056	O				1.75
78.500	0.00	0.01	2.056	O				1.75
78.583	0.00	0.01	2.056	O				1.75
78.667	0.00	0.01	2.055	O				1.75
78.750	0.00	0.01	2.055	O				1.75
78.833	0.00	0.01	2.055	O				1.75
78.917	0.00	0.01	2.055	O				1.75
79.000	0.00	0.01	2.055	O				1.75
79.083	0.00	0.01	2.055	O				1.75
79.167	0.00	0.01	2.055	O				1.75
79.250	0.00	0.01	2.055	O				1.75
79.333	0.00	0.01	2.055	O				1.75
79.417	0.00	0.01	2.055	O				1.75
79.500	0.00	0.01	2.055	O				1.75
79.583	0.00	0.01	2.055	O				1.75
79.667	0.00	0.01	2.055	O				1.75
79.750	0.00	0.01	2.055	O				1.75
79.833	0.00	0.01	2.055	O				1.75
79.917	0.00	0.01	2.055	O				1.75
80.000	0.00	0.01	2.055	O				1.75
80.083	0.00	0.01	2.055	O				1.75
80.167	0.00	0.01	2.055	O				1.75
80.250	0.00	0.01	2.055	O				1.75
80.333	0.00	0.01	2.055	O				1.75
80.417	0.00	0.01	2.054	O				1.75
80.500	0.00	0.01	2.054	O				1.75
80.583	0.00	0.01	2.054	O				1.75
80.667	0.00	0.01	2.054	O				1.75
80.750	0.00	0.01	2.054	O				1.75
80.833	0.00	0.01	2.054	O				1.75
80.917	0.00	0.01	2.054	O				1.75
81.000	0.00	0.01	2.054	O				1.75
81.083	0.00	0.01	2.054	O				1.75
81.167	0.00	0.01	2.054	O				1.75
81.250	0.00	0.01	2.054	O				1.75
81.333	0.00	0.01	2.054	O				1.75
81.417	0.00	0.01	2.054	O				1.75
81.500	0.00	0.01	2.054	O				1.75
81.583	0.00	0.01	2.054	O				1.75
81.667	0.00	0.01	2.054	O				1.75
81.750	0.00	0.01	2.054	O				1.75
81.833	0.00	0.01	2.054	O				1.75
81.917	0.00	0.01	2.054	O				1.75
82.000	0.00	0.01	2.054	O				1.75
82.083	0.00	0.01	2.054	O				1.75
82.167	0.00	0.01	2.054	O				1.75
82.250	0.00	0.01	2.054	O				1.75
82.333	0.00	0.01	2.054	O				1.75
82.417	0.00	0.01	2.054	O				1.75
82.500	0.00	0.00	2.053	O				1.75
82.583	0.00	0.00	2.053	O				1.75
82.667	0.00	0.00	2.053	O				1.75
82.750	0.00	0.00	2.053	O				1.75
82.833	0.00	0.00	2.053	O				1.75
82.917	0.00	0.00	2.053	O				1.75
83.000	0.00	0.00	2.053	O				1.75
83.083	0.00	0.00	2.053	O				1.75
83.167	0.00	0.00	2.053	O				1.75
83.250	0.00	0.00	2.053	O				1.75
83.333	0.00	0.00	2.053	O				1.75
83.417	0.00	0.00	2.053	O				1.75
83.500	0.00	0.00	2.053	O				1.75
83.583	0.00	0.00	2.053	O				1.75
83.667	0.00	0.00	2.053	O				1.75
83.750	0.00	0.00	2.053	O				1.75
83.833	0.00	0.00	2.053	O				1.75
83.917	0.00	0.00	2.053	O				1.75
84.000	0.00	0.00	2.053	O				1.75
84.083	0.00	0.00	2.053	O				1.75
84.167	0.00	0.00	2.053	O				1.75
84.250	0.00	0.00	2.053	O				1.75
84.333	0.00	0.00	2.053	O				1.75
84.417	0.00	0.00	2.053	O				1.75
84.500	0.00	0.00	2.053	O				1.75
84.583	0.00	0.00	2.053	O				1.75
84.667	0.00	0.00	2.053	O				1.75

84.750	0.00	0.00	2.053	O				1.75
84.833	0.00	0.00	2.053	O				1.75
84.917	0.00	0.00	2.053	O				1.75
85.000	0.00	0.00	2.053	O				1.75
85.083	0.00	0.00	2.053	O				1.75
85.167	0.00	0.00	2.053	O				1.75
85.250	0.00	0.00	2.053	O				1.75
85.333	0.00	0.00	2.052	O				1.75
85.417	0.00	0.00	2.052	O				1.75
85.500	0.00	0.00	2.052	O				1.75
85.583	0.00	0.00	2.052	O				1.75
85.667	0.00	0.00	2.052	O				1.75
85.750	0.00	0.00	2.052	O				1.75
85.833	0.00	0.00	2.052	O				1.75
85.917	0.00	0.00	2.052	O				1.75
86.000	0.00	0.00	2.052	O				1.75
86.083	0.00	0.00	2.052	O				1.75
86.167	0.00	0.00	2.052	O				1.75
86.250	0.00	0.00	2.052	O				1.75
86.333	0.00	0.00	2.052	O				1.75
86.417	0.00	0.00	2.052	O				1.75
86.500	0.00	0.00	2.052	O				1.75
86.583	0.00	0.00	2.052	O				1.75
86.667	0.00	0.00	2.052	O				1.75
86.750	0.00	0.00	2.052	O				1.75
86.833	0.00	0.00	2.052	O				1.75
86.917	0.00	0.00	2.052	O				1.75
87.000	0.00	0.00	2.052	O				1.75
87.083	0.00	0.00	2.052	O				1.75
87.167	0.00	0.00	2.052	O				1.75
87.250	0.00	0.00	2.052	O				1.75
87.333	0.00	0.00	2.052	O				1.75
87.417	0.00	0.00	2.052	O				1.75
87.500	0.00	0.00	2.052	O				1.75
87.583	0.00	0.00	2.052	O				1.75
87.667	0.00	0.00	2.052	O				1.75
87.750	0.00	0.00	2.052	O				1.75
87.833	0.00	0.00	2.052	O				1.75
87.917	0.00	0.00	2.052	O				1.75
88.000	0.00	0.00	2.052	O				1.75
88.083	0.00	0.00	2.052	O				1.75
88.167	0.00	0.00	2.052	O				1.75
88.250	0.00	0.00	2.052	O				1.75
88.333	0.00	0.00	2.052	O				1.75
88.417	0.00	0.00	2.052	O				1.75
88.500	0.00	0.00	2.052	O				1.75
88.583	0.00	0.00	2.052	O				1.75
88.667	0.00	0.00	2.052	O				1.75
88.750	0.00	0.00	2.052	O				1.75
88.833	0.00	0.00	2.052	O				1.75
88.917	0.00	0.00	2.052	O				1.75
89.000	0.00	0.00	2.052	O				1.75
89.083	0.00	0.00	2.052	O				1.75
89.167	0.00	0.00	2.052	O				1.75
89.250	0.00	0.00	2.052	O				1.75
89.333	0.00	0.00	2.052	O				1.75
89.417	0.00	0.00	2.052	O				1.75
89.500	0.00	0.00	2.052	O				1.75
89.583	0.00	0.00	2.052	O				1.75
89.667	0.00	0.00	2.052	O				1.75
89.750	0.00	0.00	2.051	O				1.75
89.833	0.00	0.00	2.051	O				1.75
89.917	0.00	0.00	2.051	O				1.75
90.000	0.00	0.00	2.051	O				1.75
90.083	0.00	0.00	2.051	O				1.75
90.167	0.00	0.00	2.051	O				1.75
90.250	0.00	0.00	2.051	O				1.75
90.333	0.00	0.00	2.051	O				1.75
90.417	0.00	0.00	2.051	O				1.75
90.500	0.00	0.00	2.051	O				1.75
90.583	0.00	0.00	2.051	O				1.75
90.667	0.00	0.00	2.051	O				1.75
90.750	0.00	0.00	2.051	O				1.75
90.833	0.00	0.00	2.051	O				1.75
90.917	0.00	0.00	2.051	O				1.75
91.000	0.00	0.00	2.051	O				1.75
91.083	0.00	0.00	2.051	O				1.75
91.167	0.00	0.00	2.051	O				1.75
91.250	0.00	0.00	2.051	O				1.75
91.333	0.00	0.00	2.051	O				1.75
91.417	0.00	0.00	2.051	O				1.75
91.500	0.00	0.00	2.051	O				1.75
91.583	0.00	0.00	2.051	O				1.75
91.667	0.00	0.00	2.051	O				1.75
91.750	0.00	0.00	2.051	O				1.75
91.833	0.00	0.00	2.051	O				1.75
91.917	0.00	0.00	2.051	O				1.75
92.000	0.00	0.00	2.051	O				1.75
92.083	0.00	0.00	2.051	O				1.75
92.167	0.00	0.00	2.051	O				1.75
92.250	0.00	0.00	2.051	O				1.75
92.333	0.00	0.00	2.051	O				1.75
92.417	0.00	0.00	2.051	O				1.75
92.500	0.00	0.00	2.051	O				1.75
92.583	0.00	0.00	2.051	O				1.75
92.667	0.00	0.00	2.051	O				1.75
92.750	0.00	0.00	2.051	O				1.75
92.833	0.00	0.00	2.051	O				1.75
92.917	0.00	0.00	2.051	O				1.75

93.000	0.00	0.00	2.051	O				1.75
93.083	0.00	0.00	2.051	O				1.75
93.167	0.00	0.00	2.051	O				1.75
93.250	0.00	0.00	2.051	O				1.75
93.333	0.00	0.00	2.051	O				1.75
93.417	0.00	0.00	2.051	O				1.75
93.500	0.00	0.00	2.051	O				1.75
93.583	0.00	0.00	2.051	O				1.75
93.667	0.00	0.00	2.051	O				1.75
93.750	0.00	0.00	2.051	O				1.75
93.833	0.00	0.00	2.051	O				1.75
93.917	0.00	0.00	2.051	O				1.75
94.000	0.00	0.00	2.051	O				1.75
94.083	0.00	0.00	2.051	O				1.75
94.167	0.00	0.00	2.051	O				1.75
94.250	0.00	0.00	2.051	O				1.75
94.333	0.00	0.00	2.051	O				1.75
94.417	0.00	0.00	2.051	O				1.75
94.500	0.00	0.00	2.051	O				1.75
94.583	0.00	0.00	2.051	O				1.75
94.667	0.00	0.00	2.051	O				1.75
94.750	0.00	0.00	2.051	O				1.75
94.833	0.00	0.00	2.051	O				1.75
94.917	0.00	0.00	2.051	O				1.75
95.000	0.00	0.00	2.051	O				1.75
95.083	0.00	0.00	2.051	O				1.75
95.167	0.00	0.00	2.051	O				1.75
95.250	0.00	0.00	2.051	O				1.75
95.333	0.00	0.00	2.051	O				1.75
95.417	0.00	0.00	2.051	O				1.75
95.500	0.00	0.00	2.051	O				1.75
95.583	0.00	0.00	2.051	O				1.75
95.667	0.00	0.00	2.051	O				1.75
95.750	0.00	0.00	2.051	O				1.75
95.833	0.00	0.00	2.051	O				1.75
95.917	0.00	0.00	2.051	O				1.75
96.000	0.00	0.00	2.051	O				1.75
96.083	0.00	0.00	2.051	O				1.75
96.167	0.00	0.00	2.051	O				1.75

Remaining water in basin = 2.05 (Ac.Ft)

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

Number of intervals = 1154
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 18.453 (CFS)
Total volume = 12.804 (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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Jurupa Valley Commerce Park
Basin Rating Curve

Basin B

Elevation (ft)	Depth (ft)	Area (sq-ft)	Storage (cu-ft)	Storage (ac-ft)	Type C Number Diameter (in) Invert (ft) Hole 0.60 4 3.00 881.25 Discharge (cfs)	Type C Number Diameter (in) Top (ft) Riser 0.60 1 24.00 882.25 Discharge (cfs)	Total Discharge (cfs)
879.75	0.00	32,500	0	0.00	0.00	0.00	0.00
880.00	0.25	33,100	8,200	0.19	0.00	0.00	0.00
881.00	1.25	36,500	43,125	0.99	0.00	0.00	0.00
881.25	1.50	37,375	52,406	1.20	0.00	0.00	0.00
882.00	2.25	40,000	81,300	1.87	0.82	0.00	0.82
882.25	2.50	40,875	91,484	2.10	0.95	0.00	0.95
883.00	3.25	43,500	123,125	2.83	1.25	13.10	14.35
884.00	4.25	47,200	168,500	3.87	1.57	20.01	21.58
885.00	5.25	53,000	218,600	5.02	1.83	25.08	26.92
885.60	5.85	53,900	250,670	5.75	1.97	27.69	29.66

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/02/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
MITIGATION ANALYSIS - 100-YEAR
1-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 3384PBBC1100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 18
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 59.924 (CFS)
Total volume = 2.086 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
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User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 18
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
0.250	0.190	0.000	0.190	0.190
1.250	0.990	0.000	0.990	0.990
1.500	1.200	0.000	1.200	1.200
2.250	1.870	0.820	1.867	1.873
2.500	2.100	0.950	2.097	2.103
3.250	2.830	14.350	2.781	2.879
4.250	3.870	21.580	3.796	3.944
5.250	5.020	26.920	4.927	5.113
5.850	5.750	29.660	5.648	5.852

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 15.0 29.96 44.94 59.92	Depth (Ft.)
0.083	2.99	0.00	0.010	OI	0.01
0.167	8.85	0.00	0.051	O I	0.07
0.250	11.01	0.00	0.119	O I	0.16
0.333	12.06	0.00	0.199	O I	0.26
0.417	13.65	0.00	0.287	O I	0.37
0.500	15.82	0.00	0.389	O I	0.50
0.583	18.37	0.00	0.507	O I	0.65
0.667	21.75	0.00	0.645	O I	0.82
0.750	28.83	0.00	0.819	O I	1.04
0.833	50.95	0.00	1.094	O I	1.37
0.917	59.92	0.34	1.474	O I	1.81
1.000	29.55	0.71	1.779	O I	2.15
1.083	16.30	0.85	1.931	O I	2.32
1.167	6.91	0.90	2.005	O I	2.40
1.250	3.55	0.91	2.035	OI	2.43
1.333	1.84	0.92	2.047	O	2.44
1.417	0.46	0.92	2.049	O	2.44
1.500	0.14	0.92	2.045	O	2.44
1.583	0.00	0.92	2.039	O	2.43
1.667	0.00	0.91	2.032	O	2.43
1.750	0.00	0.91	2.026	O	2.42
1.833	0.00	0.90	2.020	O	2.41
1.917	0.00	0.90	2.014	O	2.41

2.000	0.00	0.90	2.008	O					2.40
2.083	0.00	0.89	2.001	O					2.39
2.167	0.00	0.89	1.995	O					2.39
2.250	0.00	0.89	1.989	O					2.38
2.333	0.00	0.88	1.983	O					2.37
2.417	0.00	0.88	1.977	O					2.37
2.500	0.00	0.88	1.971	O					2.36
2.583	0.00	0.87	1.965	O					2.35
2.667	0.00	0.87	1.959	O					2.35
2.750	0.00	0.87	1.953	O					2.34
2.833	0.00	0.86	1.947	O					2.33
2.917	0.00	0.86	1.941	O					2.33
3.000	0.00	0.86	1.935	O					2.32
3.083	0.00	0.85	1.929	O					2.31
3.167	0.00	0.85	1.923	O					2.31
3.250	0.00	0.85	1.917	O					2.30
3.333	0.00	0.84	1.912	O					2.30
3.417	0.00	0.84	1.906	O					2.29
3.500	0.00	0.84	1.900	O					2.28
3.583	0.00	0.83	1.894	O					2.28
3.667	0.00	0.83	1.889	O					2.27
3.750	0.00	0.83	1.883	O					2.26
3.833	0.00	0.82	1.877	O					2.26
3.917	0.00	0.82	1.872	O					2.25
4.000	0.00	0.81	1.866	O					2.25
4.083	0.00	0.81	1.860	O					2.24
4.167	0.00	0.80	1.855	O					2.23
4.250	0.00	0.79	1.849	O					2.23
4.333	0.00	0.79	1.844	O					2.22
4.417	0.00	0.78	1.838	O					2.21
4.500	0.00	0.77	1.833	O					2.21
4.583	0.00	0.77	1.828	O					2.20
4.667	0.00	0.76	1.822	O					2.20
4.750	0.00	0.76	1.817	O					2.19
4.833	0.00	0.75	1.812	O					2.19
4.917	0.00	0.74	1.807	O					2.18
5.000	0.00	0.74	1.802	O					2.17
5.083	0.00	0.73	1.797	O					2.17
5.167	0.00	0.72	1.792	O					2.16
5.250	0.00	0.72	1.787	O					2.16
5.333	0.00	0.71	1.782	O					2.15
5.417	0.00	0.71	1.777	O					2.15
5.500	0.00	0.70	1.772	O					2.14
5.583	0.00	0.69	1.767	O					2.14
5.667	0.00	0.69	1.763	O					2.13
5.750	0.00	0.68	1.758	O					2.12
5.833	0.00	0.68	1.753	O					2.12
5.917	0.00	0.67	1.749	O					2.11
6.000	0.00	0.67	1.744	O					2.11
6.083	0.00	0.66	1.739	O					2.10
6.167	0.00	0.65	1.735	O					2.10
6.250	0.00	0.65	1.730	O					2.09
6.333	0.00	0.64	1.726	O					2.09
6.417	0.00	0.64	1.721	O					2.08
6.500	0.00	0.63	1.717	O					2.08
6.583	0.00	0.63	1.713	O					2.07
6.667	0.00	0.62	1.708	O					2.07
6.750	0.00	0.62	1.704	O					2.06
6.833	0.00	0.61	1.700	O					2.06
6.917	0.00	0.61	1.696	O					2.05
7.000	0.00	0.60	1.692	O					2.05
7.083	0.00	0.60	1.687	O					2.05
7.167	0.00	0.59	1.683	O					2.04
7.250	0.00	0.59	1.679	O					2.04
7.333	0.00	0.58	1.675	O					2.03
7.417	0.00	0.58	1.671	O					2.03
7.500	0.00	0.57	1.667	O					2.02
7.583	0.00	0.57	1.663	O					2.02
7.667	0.00	0.56	1.660	O					2.01
7.750	0.00	0.56	1.656	O					2.01
7.833	0.00	0.55	1.652	O					2.01
7.917	0.00	0.55	1.648	O					2.00
8.000	0.00	0.54	1.644	O					2.00
8.083	0.00	0.54	1.641	O					1.99
8.167	0.00	0.53	1.637	O					1.99
8.250	0.00	0.53	1.633	O					1.98
8.333	0.00	0.53	1.630	O					1.98
8.417	0.00	0.52	1.626	O					1.98
8.500	0.00	0.52	1.622	O					1.97
8.583	0.00	0.51	1.619	O					1.97
8.667	0.00	0.51	1.615	O					1.96
8.750	0.00	0.50	1.612	O					1.96
8.833	0.00	0.50	1.608	O					1.96
8.917	0.00	0.50	1.605	O					1.95
9.000	0.00	0.49	1.602	O					1.95
9.083	0.00	0.49	1.598	O					1.95
9.167	0.00	0.48	1.595	O					1.94
9.250	0.00	0.48	1.592	O					1.94
9.333	0.00	0.48	1.588	O					1.93
9.417	0.00	0.47	1.585	O					1.93
9.500	0.00	0.47	1.582	O					1.93
9.583	0.00	0.46	1.579	O					1.92
9.667	0.00	0.46	1.575	O					1.92
9.750	0.00	0.46	1.572	O					1.92
9.833	0.00	0.45	1.569	O					1.91
9.917	0.00	0.45	1.566	O					1.91
10.000	0.00	0.44	1.563	O					1.91

10.083	0.00	0.44	1.560	O					1.90
10.167	0.00	0.44	1.557	O					1.90
10.250	0.00	0.43	1.554	O					1.90
10.333	0.00	0.43	1.551	O					1.89
10.417	0.00	0.43	1.548	O					1.89
10.500	0.00	0.42	1.545	O					1.89
10.583	0.00	0.42	1.542	O					1.88
10.667	0.00	0.42	1.539	O					1.88
10.750	0.00	0.41	1.536	O					1.88
10.833	0.00	0.41	1.534	O					1.87
10.917	0.00	0.40	1.531	O					1.87
11.000	0.00	0.40	1.528	O					1.87
11.083	0.00	0.40	1.525	O					1.86
11.167	0.00	0.39	1.523	O					1.86
11.250	0.00	0.39	1.520	O					1.86
11.333	0.00	0.39	1.517	O					1.86
11.417	0.00	0.38	1.514	O					1.85
11.500	0.00	0.38	1.512	O					1.85
11.583	0.00	0.38	1.509	O					1.85
11.667	0.00	0.38	1.507	O					1.84
11.750	0.00	0.37	1.504	O					1.84
11.833	0.00	0.37	1.502	O					1.84
11.917	0.00	0.37	1.499	O					1.83
12.000	0.00	0.36	1.496	O					1.83
12.083	0.00	0.36	1.494	O					1.83
12.167	0.00	0.36	1.492	O					1.83
12.250	0.00	0.35	1.489	O					1.82
12.333	0.00	0.35	1.487	O					1.82
12.417	0.00	0.35	1.484	O					1.82
12.500	0.00	0.34	1.482	O					1.82
12.583	0.00	0.34	1.479	O					1.81
12.667	0.00	0.34	1.477	O					1.81
12.750	0.00	0.34	1.475	O					1.81
12.833	0.00	0.33	1.473	O					1.81
12.917	0.00	0.33	1.470	O					1.80
13.000	0.00	0.33	1.468	O					1.80
13.083	0.00	0.33	1.466	O					1.80
13.167	0.00	0.32	1.463	O					1.79
13.250	0.00	0.32	1.461	O					1.79
13.333	0.00	0.32	1.459	O					1.79
13.417	0.00	0.31	1.457	O					1.79
13.500	0.00	0.31	1.455	O					1.79
13.583	0.00	0.31	1.453	O					1.78
13.667	0.00	0.31	1.450	O					1.78
13.750	0.00	0.30	1.448	O					1.78
13.833	0.00	0.30	1.446	O					1.78
13.917	0.00	0.30	1.444	O					1.77
14.000	0.00	0.30	1.442	O					1.77
14.083	0.00	0.29	1.440	O					1.77
14.167	0.00	0.29	1.438	O					1.77
14.250	0.00	0.29	1.436	O					1.76
14.333	0.00	0.29	1.434	O					1.76
14.417	0.00	0.28	1.432	O					1.76
14.500	0.00	0.28	1.430	O					1.76
14.583	0.00	0.28	1.428	O					1.76
14.667	0.00	0.28	1.426	O					1.75
14.750	0.00	0.27	1.424	O					1.75
14.833	0.00	0.27	1.423	O					1.75
14.917	0.00	0.27	1.421	O					1.75
15.000	0.00	0.27	1.419	O					1.75
15.083	0.00	0.27	1.417	O					1.74
15.167	0.00	0.26	1.415	O					1.74
15.250	0.00	0.26	1.413	O					1.74
15.333	0.00	0.26	1.412	O					1.74
15.417	0.00	0.26	1.410	O					1.73
15.500	0.00	0.25	1.408	O					1.73
15.583	0.00	0.25	1.406	O					1.73
15.667	0.00	0.25	1.405	O					1.73
15.750	0.00	0.25	1.403	O					1.73
15.833	0.00	0.25	1.401	O					1.73
15.917	0.00	0.24	1.399	O					1.72
16.000	0.00	0.24	1.398	O					1.72
16.083	0.00	0.24	1.396	O					1.72
16.167	0.00	0.24	1.395	O					1.72
16.250	0.00	0.24	1.393	O					1.72
16.333	0.00	0.23	1.391	O					1.71
16.417	0.00	0.23	1.390	O					1.71
16.500	0.00	0.23	1.388	O					1.71
16.583	0.00	0.23	1.386	O					1.71
16.667	0.00	0.23	1.385	O					1.71
16.750	0.00	0.22	1.383	O					1.71
16.833	0.00	0.22	1.382	O					1.70
16.917	0.00	0.22	1.380	O					1.70
17.000	0.00	0.22	1.379	O					1.70
17.083	0.00	0.22	1.377	O					1.70
17.167	0.00	0.22	1.376	O					1.70
17.250	0.00	0.21	1.374	O					1.70
17.333	0.00	0.21	1.373	O					1.69
17.417	0.00	0.21	1.371	O					1.69
17.500	0.00	0.21	1.370	O					1.69
17.583	0.00	0.21	1.369	O					1.69
17.667	0.00	0.20	1.367	O					1.69
17.750	0.00	0.20	1.366	O					1.69
17.833	0.00	0.20	1.364	O					1.68
17.917	0.00	0.20	1.363	O					1.68
18.000	0.00	0.20	1.362	O					1.68
18.083	0.00	0.20	1.360	O					1.68

18.167	0.00	0.19	1.359	O					1.68
18.250	0.00	0.19	1.358	O					1.68
18.333	0.00	0.19	1.356	O					1.67
18.417	0.00	0.19	1.355	O					1.67
18.500	0.00	0.19	1.354	O					1.67
18.583	0.00	0.19	1.352	O					1.67
18.667	0.00	0.18	1.351	O					1.67
18.750	0.00	0.18	1.350	O					1.67
18.833	0.00	0.18	1.349	O					1.67
18.917	0.00	0.18	1.347	O					1.66
19.000	0.00	0.18	1.346	O					1.66
19.083	0.00	0.18	1.345	O					1.66
19.167	0.00	0.18	1.344	O					1.66
19.250	0.00	0.17	1.342	O					1.66
19.333	0.00	0.17	1.341	O					1.66
19.417	0.00	0.17	1.340	O					1.66
19.500	0.00	0.17	1.339	O					1.66
19.583	0.00	0.17	1.338	O					1.65
19.667	0.00	0.17	1.337	O					1.65
19.750	0.00	0.17	1.335	O					1.65
19.833	0.00	0.16	1.334	O					1.65
19.917	0.00	0.16	1.333	O					1.65
20.000	0.00	0.16	1.332	O					1.65
20.083	0.00	0.16	1.331	O					1.65
20.167	0.00	0.16	1.330	O					1.65
20.250	0.00	0.16	1.329	O					1.64
20.333	0.00	0.16	1.328	O					1.64
20.417	0.00	0.15	1.327	O					1.64
20.500	0.00	0.15	1.325	O					1.64
20.583	0.00	0.15	1.324	O					1.64
20.667	0.00	0.15	1.323	O					1.64
20.750	0.00	0.15	1.322	O					1.64
20.833	0.00	0.15	1.321	O					1.64
20.917	0.00	0.15	1.320	O					1.63
21.000	0.00	0.15	1.319	O					1.63
21.083	0.00	0.14	1.318	O					1.63
21.167	0.00	0.14	1.317	O					1.63
21.250	0.00	0.14	1.316	O					1.63
21.333	0.00	0.14	1.315	O					1.63
21.417	0.00	0.14	1.314	O					1.63
21.500	0.00	0.14	1.313	O					1.63
21.583	0.00	0.14	1.312	O					1.63
21.667	0.00	0.14	1.312	O					1.62
21.750	0.00	0.14	1.311	O					1.62
21.833	0.00	0.13	1.310	O					1.62
21.917	0.00	0.13	1.309	O					1.62
22.000	0.00	0.13	1.308	O					1.62
22.083	0.00	0.13	1.307	O					1.62
22.167	0.00	0.13	1.306	O					1.62
22.250	0.00	0.13	1.305	O					1.62
22.333	0.00	0.13	1.304	O					1.62
22.417	0.00	0.13	1.303	O					1.62
22.500	0.00	0.13	1.303	O					1.61
22.583	0.00	0.12	1.302	O					1.61
22.667	0.00	0.12	1.301	O					1.61
22.750	0.00	0.12	1.300	O					1.61
22.833	0.00	0.12	1.299	O					1.61
22.917	0.00	0.12	1.298	O					1.61
23.000	0.00	0.12	1.297	O					1.61
23.083	0.00	0.12	1.297	O					1.61
23.167	0.00	0.12	1.296	O					1.61
23.250	0.00	0.12	1.295	O					1.61
23.333	0.00	0.12	1.294	O					1.61
23.417	0.00	0.11	1.293	O					1.60
23.500	0.00	0.11	1.293	O					1.60
23.583	0.00	0.11	1.292	O					1.60
23.667	0.00	0.11	1.291	O					1.60
23.750	0.00	0.11	1.290	O					1.60
23.833	0.00	0.11	1.290	O					1.60
23.917	0.00	0.11	1.289	O					1.60
24.000	0.00	0.11	1.288	O					1.60
24.083	0.00	0.11	1.287	O					1.60
24.167	0.00	0.11	1.287	O					1.60
24.250	0.00	0.11	1.286	O					1.60
24.333	0.00	0.10	1.285	O					1.60
24.417	0.00	0.10	1.284	O					1.59
24.500	0.00	0.10	1.284	O					1.59
24.583	0.00	0.10	1.283	O					1.59
24.667	0.00	0.10	1.282	O					1.59
24.750	0.00	0.10	1.282	O					1.59
24.833	0.00	0.10	1.281	O					1.59
24.917	0.00	0.10	1.280	O					1.59
25.000	0.00	0.10	1.280	O					1.59
25.083	0.00	0.10	1.279	O					1.59
25.167	0.00	0.10	1.278	O					1.59
25.250	0.00	0.09	1.278	O					1.59
25.333	0.00	0.09	1.277	O					1.59
25.417	0.00	0.09	1.276	O					1.59
25.500	0.00	0.09	1.276	O					1.58
25.583	0.00	0.09	1.275	O					1.58
25.667	0.00	0.09	1.274	O					1.58
25.750	0.00	0.09	1.274	O					1.58
25.833	0.00	0.09	1.273	O					1.58
25.917	0.00	0.09	1.273	O					1.58
26.000	0.00	0.09	1.272	O					1.58
26.083	0.00	0.09	1.271	O					1.58
26.167	0.00	0.09	1.271	O					1.58

26.250	0.00	0.09	1.270	O					1.58
26.333	0.00	0.09	1.270	O					1.58
26.417	0.00	0.08	1.269	O					1.58
26.500	0.00	0.08	1.268	O					1.58
26.583	0.00	0.08	1.268	O					1.58
26.667	0.00	0.08	1.267	O					1.58
26.750	0.00	0.08	1.267	O					1.57
26.833	0.00	0.08	1.266	O					1.57
26.917	0.00	0.08	1.266	O					1.57
27.000	0.00	0.08	1.265	O					1.57
27.083	0.00	0.08	1.264	O					1.57
27.167	0.00	0.08	1.264	O					1.57
27.250	0.00	0.08	1.263	O					1.57
27.333	0.00	0.08	1.263	O					1.57
27.417	0.00	0.08	1.262	O					1.57
27.500	0.00	0.08	1.262	O					1.57
27.583	0.00	0.08	1.261	O					1.57
27.667	0.00	0.07	1.261	O					1.57
27.750	0.00	0.07	1.260	O					1.57
27.833	0.00	0.07	1.260	O					1.57
27.917	0.00	0.07	1.259	O					1.57
28.000	0.00	0.07	1.259	O					1.57
28.083	0.00	0.07	1.258	O					1.57
28.167	0.00	0.07	1.258	O					1.56
28.250	0.00	0.07	1.257	O					1.56
28.333	0.00	0.07	1.257	O					1.56
28.417	0.00	0.07	1.256	O					1.56
28.500	0.00	0.07	1.256	O					1.56
28.583	0.00	0.07	1.255	O					1.56
28.667	0.00	0.07	1.255	O					1.56
28.750	0.00	0.07	1.254	O					1.56
28.833	0.00	0.07	1.254	O					1.56
28.917	0.00	0.07	1.254	O					1.56
29.000	0.00	0.07	1.253	O					1.56
29.083	0.00	0.06	1.253	O					1.56
29.167	0.00	0.06	1.252	O					1.56
29.250	0.00	0.06	1.252	O					1.56
29.333	0.00	0.06	1.251	O					1.56
29.417	0.00	0.06	1.251	O					1.56
29.500	0.00	0.06	1.250	O					1.56
29.583	0.00	0.06	1.250	O					1.56
29.667	0.00	0.06	1.250	O					1.56
29.750	0.00	0.06	1.249	O					1.56
29.833	0.00	0.06	1.249	O					1.55
29.917	0.00	0.06	1.248	O					1.55
30.000	0.00	0.06	1.248	O					1.55
30.083	0.00	0.06	1.248	O					1.55
30.167	0.00	0.06	1.247	O					1.55
30.250	0.00	0.06	1.247	O					1.55
30.333	0.00	0.06	1.246	O					1.55
30.417	0.00	0.06	1.246	O					1.55
30.500	0.00	0.06	1.246	O					1.55
30.583	0.00	0.06	1.245	O					1.55
30.667	0.00	0.05	1.245	O					1.55
30.750	0.00	0.05	1.244	O					1.55
30.833	0.00	0.05	1.244	O					1.55
30.917	0.00	0.05	1.244	O					1.55
31.000	0.00	0.05	1.243	O					1.55
31.083	0.00	0.05	1.243	O					1.55
31.167	0.00	0.05	1.243	O					1.55
31.250	0.00	0.05	1.242	O					1.55
31.333	0.00	0.05	1.242	O					1.55
31.417	0.00	0.05	1.242	O					1.55
31.500	0.00	0.05	1.241	O					1.55
31.583	0.00	0.05	1.241	O					1.55
31.667	0.00	0.05	1.241	O					1.55
31.750	0.00	0.05	1.240	O					1.55
31.833	0.00	0.05	1.240	O					1.54
31.917	0.00	0.05	1.240	O					1.54
32.000	0.00	0.05	1.239	O					1.54
32.083	0.00	0.05	1.239	O					1.54
32.167	0.00	0.05	1.239	O					1.54
32.250	0.00	0.05	1.238	O					1.54
32.333	0.00	0.05	1.238	O					1.54
32.417	0.00	0.05	1.238	O					1.54
32.500	0.00	0.05	1.237	O					1.54
32.583	0.00	0.05	1.237	O					1.54
32.667	0.00	0.04	1.237	O					1.54
32.750	0.00	0.04	1.236	O					1.54
32.833	0.00	0.04	1.236	O					1.54
32.917	0.00	0.04	1.236	O					1.54
33.000	0.00	0.04	1.235	O					1.54
33.083	0.00	0.04	1.235	O					1.54
33.167	0.00	0.04	1.235	O					1.54
33.250	0.00	0.04	1.235	O					1.54
33.333	0.00	0.04	1.234	O					1.54
33.417	0.00	0.04	1.234	O					1.54
33.500	0.00	0.04	1.234	O					1.54
33.583	0.00	0.04	1.233	O					1.54
33.667	0.00	0.04	1.233	O					1.54
33.750	0.00	0.04	1.233	O					1.54
33.833	0.00	0.04	1.233	O					1.54
33.917	0.00	0.04	1.232	O					1.54
34.000	0.00	0.04	1.232	O					1.54
34.083	0.00	0.04	1.232	O					1.54
34.167	0.00	0.04	1.231	O					1.54
34.250	0.00	0.04	1.231	O					1.53

34.333	0.00	0.04	1.231	O					1.53
34.417	0.00	0.04	1.231	O					1.53
34.500	0.00	0.04	1.230	O					1.53
34.583	0.00	0.04	1.230	O					1.53
34.667	0.00	0.04	1.230	O					1.53
34.750	0.00	0.04	1.230	O					1.53
34.833	0.00	0.04	1.229	O					1.53
34.917	0.00	0.04	1.229	O					1.53
35.000	0.00	0.04	1.229	O					1.53
35.083	0.00	0.04	1.229	O					1.53
35.167	0.00	0.03	1.228	O					1.53
35.250	0.00	0.03	1.228	O					1.53
35.333	0.00	0.03	1.228	O					1.53
35.417	0.00	0.03	1.228	O					1.53
35.500	0.00	0.03	1.228	O					1.53
35.583	0.00	0.03	1.227	O					1.53
35.667	0.00	0.03	1.227	O					1.53
35.750	0.00	0.03	1.227	O					1.53
35.833	0.00	0.03	1.227	O					1.53
35.917	0.00	0.03	1.226	O					1.53
36.000	0.00	0.03	1.226	O					1.53
36.083	0.00	0.03	1.226	O					1.53
36.167	0.00	0.03	1.226	O					1.53
36.250	0.00	0.03	1.226	O					1.53
36.333	0.00	0.03	1.225	O					1.53
36.417	0.00	0.03	1.225	O					1.53
36.500	0.00	0.03	1.225	O					1.53
36.583	0.00	0.03	1.225	O					1.53
36.667	0.00	0.03	1.224	O					1.53
36.750	0.00	0.03	1.224	O					1.53
36.833	0.00	0.03	1.224	O					1.53
36.917	0.00	0.03	1.224	O					1.53
37.000	0.00	0.03	1.224	O					1.53
37.083	0.00	0.03	1.223	O					1.53
37.167	0.00	0.03	1.223	O					1.53
37.250	0.00	0.03	1.223	O					1.53
37.333	0.00	0.03	1.223	O					1.53
37.417	0.00	0.03	1.223	O					1.53
37.500	0.00	0.03	1.222	O					1.53
37.583	0.00	0.03	1.222	O					1.52
37.667	0.00	0.03	1.222	O					1.52
37.750	0.00	0.03	1.222	O					1.52
37.833	0.00	0.03	1.222	O					1.52
37.917	0.00	0.03	1.222	O					1.52
38.000	0.00	0.03	1.221	O					1.52
38.083	0.00	0.03	1.221	O					1.52
38.167	0.00	0.03	1.221	O					1.52
38.250	0.00	0.03	1.221	O					1.52
38.333	0.00	0.03	1.221	O					1.52
38.417	0.00	0.03	1.220	O					1.52
38.500	0.00	0.02	1.220	O					1.52
38.583	0.00	0.02	1.220	O					1.52
38.667	0.00	0.02	1.220	O					1.52
38.750	0.00	0.02	1.220	O					1.52
38.833	0.00	0.02	1.220	O					1.52
38.917	0.00	0.02	1.219	O					1.52
39.000	0.00	0.02	1.219	O					1.52
39.083	0.00	0.02	1.219	O					1.52
39.167	0.00	0.02	1.219	O					1.52
39.250	0.00	0.02	1.219	O					1.52
39.333	0.00	0.02	1.219	O					1.52
39.417	0.00	0.02	1.219	O					1.52
39.500	0.00	0.02	1.218	O					1.52
39.583	0.00	0.02	1.218	O					1.52
39.667	0.00	0.02	1.218	O					1.52
39.750	0.00	0.02	1.218	O					1.52
39.833	0.00	0.02	1.218	O					1.52
39.917	0.00	0.02	1.218	O					1.52
40.000	0.00	0.02	1.217	O					1.52
40.083	0.00	0.02	1.217	O					1.52
40.167	0.00	0.02	1.217	O					1.52
40.250	0.00	0.02	1.217	O					1.52
40.333	0.00	0.02	1.217	O					1.52
40.417	0.00	0.02	1.217	O					1.52
40.500	0.00	0.02	1.217	O					1.52
40.583	0.00	0.02	1.216	O					1.52
40.667	0.00	0.02	1.216	O					1.52
40.750	0.00	0.02	1.216	O					1.52
40.833	0.00	0.02	1.216	O					1.52
40.917	0.00	0.02	1.216	O					1.52
41.000	0.00	0.02	1.216	O					1.52
41.083	0.00	0.02	1.216	O					1.52
41.167	0.00	0.02	1.216	O					1.52
41.250	0.00	0.02	1.215	O					1.52
41.333	0.00	0.02	1.215	O					1.52
41.417	0.00	0.02	1.215	O					1.52
41.500	0.00	0.02	1.215	O					1.52
41.583	0.00	0.02	1.215	O					1.52
41.667	0.00	0.02	1.215	O					1.52
41.750	0.00	0.02	1.215	O					1.52
41.833	0.00	0.02	1.215	O					1.52
41.917	0.00	0.02	1.214	O					1.52
42.000	0.00	0.02	1.214	O					1.52
42.083	0.00	0.02	1.214	O					1.52
42.167	0.00	0.02	1.214	O					1.52
42.250	0.00	0.02	1.214	O					1.52
42.333	0.00	0.02	1.214	O					1.52

42.417	0.00	0.02	1.214	O					1.52
42.500	0.00	0.02	1.214	O					1.52
42.583	0.00	0.02	1.213	O					1.52
42.667	0.00	0.02	1.213	O					1.51
42.750	0.00	0.02	1.213	O					1.51
42.833	0.00	0.02	1.213	O					1.51
42.917	0.00	0.02	1.213	O					1.51
43.000	0.00	0.02	1.213	O					1.51
43.083	0.00	0.02	1.213	O					1.51
43.167	0.00	0.02	1.213	O					1.51
43.250	0.00	0.02	1.213	O					1.51
43.333	0.00	0.02	1.212	O					1.51
43.417	0.00	0.02	1.212	O					1.51
43.500	0.00	0.01	1.212	O					1.51
43.583	0.00	0.01	1.212	O					1.51
43.667	0.00	0.01	1.212	O					1.51
43.750	0.00	0.01	1.212	O					1.51
43.833	0.00	0.01	1.212	O					1.51
43.917	0.00	0.01	1.212	O					1.51
44.000	0.00	0.01	1.212	O					1.51
44.083	0.00	0.01	1.212	O					1.51
44.167	0.00	0.01	1.211	O					1.51
44.250	0.00	0.01	1.211	O					1.51
44.333	0.00	0.01	1.211	O					1.51
44.417	0.00	0.01	1.211	O					1.51
44.500	0.00	0.01	1.211	O					1.51
44.583	0.00	0.01	1.211	O					1.51
44.667	0.00	0.01	1.211	O					1.51
44.750	0.00	0.01	1.211	O					1.51
44.833	0.00	0.01	1.211	O					1.51
44.917	0.00	0.01	1.211	O					1.51
45.000	0.00	0.01	1.211	O					1.51
45.083	0.00	0.01	1.210	O					1.51
45.167	0.00	0.01	1.210	O					1.51
45.250	0.00	0.01	1.210	O					1.51
45.333	0.00	0.01	1.210	O					1.51
45.417	0.00	0.01	1.210	O					1.51
45.500	0.00	0.01	1.210	O					1.51
45.583	0.00	0.01	1.210	O					1.51
45.667	0.00	0.01	1.210	O					1.51
45.750	0.00	0.01	1.210	O					1.51
45.833	0.00	0.01	1.210	O					1.51
45.917	0.00	0.01	1.210	O					1.51
46.000	0.00	0.01	1.210	O					1.51
46.083	0.00	0.01	1.209	O					1.51
46.167	0.00	0.01	1.209	O					1.51
46.250	0.00	0.01	1.209	O					1.51
46.333	0.00	0.01	1.209	O					1.51
46.417	0.00	0.01	1.209	O					1.51
46.500	0.00	0.01	1.209	O					1.51
46.583	0.00	0.01	1.209	O					1.51
46.667	0.00	0.01	1.209	O					1.51
46.750	0.00	0.01	1.209	O					1.51
46.833	0.00	0.01	1.209	O					1.51
46.917	0.00	0.01	1.209	O					1.51
47.000	0.00	0.01	1.209	O					1.51
47.083	0.00	0.01	1.209	O					1.51
47.167	0.00	0.01	1.208	O					1.51
47.250	0.00	0.01	1.208	O					1.51
47.333	0.00	0.01	1.208	O					1.51
47.417	0.00	0.01	1.208	O					1.51
47.500	0.00	0.01	1.208	O					1.51
47.583	0.00	0.01	1.208	O					1.51
47.667	0.00	0.01	1.208	O					1.51
47.750	0.00	0.01	1.208	O					1.51
47.833	0.00	0.01	1.208	O					1.51
47.917	0.00	0.01	1.208	O					1.51
48.000	0.00	0.01	1.208	O					1.51
48.083	0.00	0.01	1.208	O					1.51
48.167	0.00	0.01	1.208	O					1.51
48.250	0.00	0.01	1.208	O					1.51
48.333	0.00	0.01	1.208	O					1.51
48.417	0.00	0.01	1.207	O					1.51
48.500	0.00	0.01	1.207	O					1.51
48.583	0.00	0.01	1.207	O					1.51
48.667	0.00	0.01	1.207	O					1.51
48.750	0.00	0.01	1.207	O					1.51
48.833	0.00	0.01	1.207	O					1.51
48.917	0.00	0.01	1.207	O					1.51
49.000	0.00	0.01	1.207	O					1.51
49.083	0.00	0.01	1.207	O					1.51
49.167	0.00	0.01	1.207	O					1.51
49.250	0.00	0.01	1.207	O					1.51
49.333	0.00	0.01	1.207	O					1.51
49.417	0.00	0.01	1.207	O					1.51
49.500	0.00	0.01	1.207	O					1.51
49.583	0.00	0.01	1.207	O					1.51
49.667	0.00	0.01	1.207	O					1.51
49.750	0.00	0.01	1.207	O					1.51
49.833	0.00	0.01	1.206	O					1.51
49.917	0.00	0.01	1.206	O					1.51
50.000	0.00	0.01	1.206	O					1.51
50.083	0.00	0.01	1.206	O					1.51
50.167	0.00	0.01	1.206	O					1.51
50.250	0.00	0.01	1.206	O					1.51
50.333	0.00	0.01	1.206	O					1.51
50.417	0.00	0.01	1.206	O					1.51

50.500	0.00	0.01	1.206	O					1.51
50.583	0.00	0.01	1.206	O					1.51
50.667	0.00	0.01	1.206	O					1.51
50.750	0.00	0.01	1.206	O					1.51
50.833	0.00	0.01	1.206	O					1.51
50.917	0.00	0.01	1.206	O					1.51
51.000	0.00	0.01	1.206	O					1.51
51.083	0.00	0.01	1.206	O					1.51
51.167	0.00	0.01	1.206	O					1.51
51.250	0.00	0.01	1.206	O					1.51
51.333	0.00	0.01	1.206	O					1.51
51.417	0.00	0.01	1.206	O					1.51
51.500	0.00	0.01	1.205	O					1.51
51.583	0.00	0.01	1.205	O					1.51
51.667	0.00	0.01	1.205	O					1.51
51.750	0.00	0.01	1.205	O					1.51
51.833	0.00	0.01	1.205	O					1.51
51.917	0.00	0.01	1.205	O					1.51
52.000	0.00	0.01	1.205	O					1.51
52.083	0.00	0.01	1.205	O					1.51
52.167	0.00	0.01	1.205	O					1.51
52.250	0.00	0.01	1.205	O					1.51
52.333	0.00	0.01	1.205	O					1.51
52.417	0.00	0.01	1.205	O					1.51
52.500	0.00	0.01	1.205	O					1.51
52.583	0.00	0.01	1.205	O					1.51
52.667	0.00	0.01	1.205	O					1.51
52.750	0.00	0.01	1.205	O					1.51
52.833	0.00	0.01	1.205	O					1.51
52.917	0.00	0.01	1.205	O					1.51
53.000	0.00	0.01	1.205	O					1.51
53.083	0.00	0.01	1.205	O					1.51
53.167	0.00	0.01	1.205	O					1.51
53.250	0.00	0.01	1.205	O					1.51
53.333	0.00	0.01	1.205	O					1.51
53.417	0.00	0.01	1.204	O					1.51
53.500	0.00	0.01	1.204	O					1.50
53.583	0.00	0.01	1.204	O					1.50
53.667	0.00	0.01	1.204	O					1.50
53.750	0.00	0.01	1.204	O					1.50
53.833	0.00	0.01	1.204	O					1.50
53.917	0.00	0.01	1.204	O					1.50
54.000	0.00	0.01	1.204	O					1.50
54.083	0.00	0.01	1.204	O					1.50
54.167	0.00	0.01	1.204	O					1.50
54.250	0.00	0.01	1.204	O					1.50
54.333	0.00	0.01	1.204	O					1.50
54.417	0.00	0.00	1.204	O					1.50
54.500	0.00	0.00	1.204	O					1.50
54.583	0.00	0.00	1.204	O					1.50
54.667	0.00	0.00	1.204	O					1.50
54.750	0.00	0.00	1.204	O					1.50
54.833	0.00	0.00	1.204	O					1.50
54.917	0.00	0.00	1.204	O					1.50
55.000	0.00	0.00	1.204	O					1.50
55.083	0.00	0.00	1.204	O					1.50
55.167	0.00	0.00	1.204	O					1.50
55.250	0.00	0.00	1.204	O					1.50
55.333	0.00	0.00	1.204	O					1.50
55.417	0.00	0.00	1.204	O					1.50
55.500	0.00	0.00	1.204	O					1.50
55.583	0.00	0.00	1.204	O					1.50
55.667	0.00	0.00	1.204	O					1.50
55.750	0.00	0.00	1.204	O					1.50
55.833	0.00	0.00	1.204	O					1.50
55.917	0.00	0.00	1.203	O					1.50
56.000	0.00	0.00	1.203	O					1.50
56.083	0.00	0.00	1.203	O					1.50
56.167	0.00	0.00	1.203	O					1.50
56.250	0.00	0.00	1.203	O					1.50
56.333	0.00	0.00	1.203	O					1.50
56.417	0.00	0.00	1.203	O					1.50
56.500	0.00	0.00	1.203	O					1.50
56.583	0.00	0.00	1.203	O					1.50
56.667	0.00	0.00	1.203	O					1.50
56.750	0.00	0.00	1.203	O					1.50
56.833	0.00	0.00	1.203	O					1.50
56.917	0.00	0.00	1.203	O					1.50
57.000	0.00	0.00	1.203	O					1.50
57.083	0.00	0.00	1.203	O					1.50
57.167	0.00	0.00	1.203	O					1.50
57.250	0.00	0.00	1.203	O					1.50
57.333	0.00	0.00	1.203	O					1.50
57.417	0.00	0.00	1.203	O					1.50
57.500	0.00	0.00	1.203	O					1.50
57.583	0.00	0.00	1.203	O					1.50
57.667	0.00	0.00	1.203	O					1.50
57.750	0.00	0.00	1.203	O					1.50
57.833	0.00	0.00	1.203	O					1.50
57.917	0.00	0.00	1.203	O					1.50
58.000	0.00	0.00	1.203	O					1.50
58.083	0.00	0.00	1.203	O					1.50
58.167	0.00	0.00	1.203	O					1.50
58.250	0.00	0.00	1.203	O					1.50
58.333	0.00	0.00	1.203	O					1.50
58.417	0.00	0.00	1.203	O					1.50
58.500	0.00	0.00	1.203	O					1.50

58.583	0.00	0.00	1.203	O					1.50
58.667	0.00	0.00	1.203	O					1.50
58.750	0.00	0.00	1.203	O					1.50
58.833	0.00	0.00	1.203	O					1.50
58.917	0.00	0.00	1.203	O					1.50
59.000	0.00	0.00	1.203	O					1.50
59.083	0.00	0.00	1.203	O					1.50
59.167	0.00	0.00	1.203	O					1.50
59.250	0.00	0.00	1.202	O					1.50
59.333	0.00	0.00	1.202	O					1.50
59.417	0.00	0.00	1.202	O					1.50
59.500	0.00	0.00	1.202	O					1.50
59.583	0.00	0.00	1.202	O					1.50
59.667	0.00	0.00	1.202	O					1.50
59.750	0.00	0.00	1.202	O					1.50
59.833	0.00	0.00	1.202	O					1.50
59.917	0.00	0.00	1.202	O					1.50
60.000	0.00	0.00	1.202	O					1.50
60.083	0.00	0.00	1.202	O					1.50
60.167	0.00	0.00	1.202	O					1.50
60.250	0.00	0.00	1.202	O					1.50
60.333	0.00	0.00	1.202	O					1.50
60.417	0.00	0.00	1.202	O					1.50
60.500	0.00	0.00	1.202	O					1.50
60.583	0.00	0.00	1.202	O					1.50
60.667	0.00	0.00	1.202	O					1.50
60.750	0.00	0.00	1.202	O					1.50
60.833	0.00	0.00	1.202	O					1.50
60.917	0.00	0.00	1.202	O					1.50
61.000	0.00	0.00	1.202	O					1.50
61.083	0.00	0.00	1.202	O					1.50
61.167	0.00	0.00	1.202	O					1.50
61.250	0.00	0.00	1.202	O					1.50
61.333	0.00	0.00	1.202	O					1.50
61.417	0.00	0.00	1.202	O					1.50
61.500	0.00	0.00	1.202	O					1.50
61.583	0.00	0.00	1.202	O					1.50
61.667	0.00	0.00	1.202	O					1.50
61.750	0.00	0.00	1.202	O					1.50
61.833	0.00	0.00	1.202	O					1.50
61.917	0.00	0.00	1.202	O					1.50
62.000	0.00	0.00	1.202	O					1.50
62.083	0.00	0.00	1.202	O					1.50
62.167	0.00	0.00	1.202	O					1.50
62.250	0.00	0.00	1.202	O					1.50
62.333	0.00	0.00	1.202	O					1.50
62.417	0.00	0.00	1.202	O					1.50
62.500	0.00	0.00	1.202	O					1.50
62.583	0.00	0.00	1.202	O					1.50
62.667	0.00	0.00	1.202	O					1.50
62.750	0.00	0.00	1.202	O					1.50
62.833	0.00	0.00	1.202	O					1.50
62.917	0.00	0.00	1.202	O					1.50
63.000	0.00	0.00	1.202	O					1.50
63.083	0.00	0.00	1.202	O					1.50
63.167	0.00	0.00	1.202	O					1.50
63.250	0.00	0.00	1.202	O					1.50
63.333	0.00	0.00	1.202	O					1.50
63.417	0.00	0.00	1.202	O					1.50
63.500	0.00	0.00	1.202	O					1.50
63.583	0.00	0.00	1.202	O					1.50
63.667	0.00	0.00	1.202	O					1.50
63.750	0.00	0.00	1.202	O					1.50
63.833	0.00	0.00	1.202	O					1.50
63.917	0.00	0.00	1.202	O					1.50
64.000	0.00	0.00	1.202	O					1.50
64.083	0.00	0.00	1.202	O					1.50
64.167	0.00	0.00	1.202	O					1.50
64.250	0.00	0.00	1.202	O					1.50
64.333	0.00	0.00	1.201	O					1.50
64.417	0.00	0.00	1.201	O					1.50
64.500	0.00	0.00	1.201	O					1.50
64.583	0.00	0.00	1.201	O					1.50
64.667	0.00	0.00	1.201	O					1.50
64.750	0.00	0.00	1.201	O					1.50
64.833	0.00	0.00	1.201	O					1.50
64.917	0.00	0.00	1.201	O					1.50
65.000	0.00	0.00	1.201	O					1.50
65.083	0.00	0.00	1.201	O					1.50
65.167	0.00	0.00	1.201	O					1.50
65.250	0.00	0.00	1.201	O					1.50
65.333	0.00	0.00	1.201	O					1.50
65.417	0.00	0.00	1.201	O					1.50
65.500	0.00	0.00	1.201	O					1.50
65.583	0.00	0.00	1.201	O					1.50
65.667	0.00	0.00	1.201	O					1.50
65.750	0.00	0.00	1.201	O					1.50
65.833	0.00	0.00	1.201	O					1.50
65.917	0.00	0.00	1.201	O					1.50
66.000	0.00	0.00	1.201	O					1.50
66.083	0.00	0.00	1.201	O					1.50
66.167	0.00	0.00	1.201	O					1.50
66.250	0.00	0.00	1.201	O					1.50
66.333	0.00	0.00	1.201	O					1.50
66.417	0.00	0.00	1.201	O					1.50
66.500	0.00	0.00	1.201	O					1.50
66.583	0.00	0.00	1.201	O					1.50

66.667	0.00	0.00	1.201	O					1.50
66.750	0.00	0.00	1.201	O					1.50
66.833	0.00	0.00	1.201	O					1.50
66.917	0.00	0.00	1.201	O					1.50
67.000	0.00	0.00	1.201	O					1.50
67.083	0.00	0.00	1.201	O					1.50
67.167	0.00	0.00	1.201	O					1.50
67.250	0.00	0.00	1.201	O					1.50
67.333	0.00	0.00	1.201	O					1.50
67.417	0.00	0.00	1.201	O					1.50
67.500	0.00	0.00	1.201	O					1.50
67.583	0.00	0.00	1.201	O					1.50
67.667	0.00	0.00	1.201	O					1.50
67.750	0.00	0.00	1.201	O					1.50
67.833	0.00	0.00	1.201	O					1.50
67.917	0.00	0.00	1.201	O					1.50
68.000	0.00	0.00	1.201	O					1.50
68.083	0.00	0.00	1.201	O					1.50
68.167	0.00	0.00	1.201	O					1.50
68.250	0.00	0.00	1.201	O					1.50
68.333	0.00	0.00	1.201	O					1.50
68.417	0.00	0.00	1.201	O					1.50
68.500	0.00	0.00	1.201	O					1.50
68.583	0.00	0.00	1.201	O					1.50
68.667	0.00	0.00	1.201	O					1.50
68.750	0.00	0.00	1.201	O					1.50
68.833	0.00	0.00	1.201	O					1.50
68.917	0.00	0.00	1.201	O					1.50
69.000	0.00	0.00	1.201	O					1.50
69.083	0.00	0.00	1.201	O					1.50
69.167	0.00	0.00	1.201	O					1.50
69.250	0.00	0.00	1.201	O					1.50
69.333	0.00	0.00	1.201	O					1.50
69.417	0.00	0.00	1.201	O					1.50
69.500	0.00	0.00	1.201	O					1.50
69.583	0.00	0.00	1.201	O					1.50
69.667	0.00	0.00	1.201	O					1.50
69.750	0.00	0.00	1.201	O					1.50
69.833	0.00	0.00	1.201	O					1.50
69.917	0.00	0.00	1.201	O					1.50
70.000	0.00	0.00	1.201	O					1.50
70.083	0.00	0.00	1.201	O					1.50
70.167	0.00	0.00	1.201	O					1.50
70.250	0.00	0.00	1.201	O					1.50
70.333	0.00	0.00	1.201	O					1.50

Remaining water in basin = 1.20 (Ac.Ft)

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

Number of intervals = 844
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.921 (CFS)
Total volume = 0.886 (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

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/02/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
MITIGATION ANALYSIS - 100-YEAR
3-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 3384PBBC3100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 42
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 36.738 (CFS)
Total volume = 3.210 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 42
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
0.250	0.190	0.000	0.190	0.190
1.250	0.990	0.000	0.990	0.990
1.500	1.200	0.000	1.200	1.200
2.250	1.870	0.820	1.867	1.873
2.500	2.100	0.950	2.097	2.103
3.250	2.830	14.350	2.781	2.879
4.250	3.870	21.580	3.796	3.944
5.250	5.020	26.920	4.927	5.113
5.850	5.750	29.660	5.648	5.852

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 9.2 18.37 27.55 36.74	Depth (Ft.)
0.083	1.41	0.00	0.005	OI	0.01
0.167	3.97	0.00	0.023	O I	0.03
0.250	4.44	0.00	0.052	O I	0.07
0.333	4.78	0.00	0.084	O I	0.11
0.417	5.64	0.00	0.120	O I	0.16
0.500	6.25	0.00	0.161	O I	0.21
0.583	6.67	0.00	0.205	O I	0.27
0.667	6.59	0.00	0.251	O I	0.33
0.750	7.16	0.00	0.298	O I	0.39
0.833	6.96	0.00	0.347	O I	0.45
0.917	6.48	0.00	0.393	O I	0.50
1.000	6.79	0.00	0.439	O I	0.56
1.083	7.81	0.00	0.489	O I	0.62
1.167	8.99	0.00	0.547	O I	0.70
1.250	9.32	0.00	0.610	O I	0.78
1.333	9.17	0.00	0.674	O I	0.85
1.417	9.61	0.00	0.739	O I	0.94
1.500	11.27	0.00	0.810	O I	1.03
1.583	11.48	0.00	0.889	O I	1.12
1.667	11.34	0.00	0.967	O I	1.22
1.750	12.93	0.00	1.051	O I	1.32
1.833	14.42	0.00	1.145	O I	1.43
1.917	14.10	0.05	1.243	O I	1.55

2.000	13.79	0.17	1.338	O	1.65
2.083	14.12	0.29	1.433	O	1.76
2.167	16.05	0.41	1.534	O	1.87
2.250	20.24	0.56	1.656	O	2.01
2.333	20.96	0.73	1.793	O	2.16
2.417	22.74	0.86	1.939	O	2.32
2.500	31.67	1.29	2.118	O	2.52
2.583	36.43	5.18	2.331	O	2.74
2.667	36.74	8.92	2.534	O	2.95
2.750	26.17	11.60	2.680	O	3.10
2.833	14.46	12.63	2.737	O	3.15
2.917	10.85	12.64	2.737	O	3.15
3.000	7.85	12.25	2.715	O	3.13
3.083	3.85	11.49	2.674	O	3.09
3.167	1.47	10.44	2.617	O	3.03
3.250	0.61	9.32	2.556	O	2.97
3.333	0.29	8.27	2.499	O	2.91
3.417	0.13	7.31	2.446	O	2.86
3.500	0.03	6.45	2.399	O	2.81
3.583	0.00	5.68	2.358	O	2.76
3.667	0.00	5.01	2.321	O	2.73
3.750	0.00	4.41	2.289	O	2.69
3.833	0.00	3.89	2.260	O	2.66
3.917	0.00	3.42	2.235	O	2.64
4.000	0.00	3.02	2.213	O	2.62
4.083	0.00	2.66	2.193	O	2.60
4.167	0.00	2.34	2.176	O	2.58
4.250	0.00	2.06	2.161	O	2.56
4.333	0.00	1.82	2.147	O	2.55
4.417	0.00	1.60	2.136	O	2.54
4.500	0.00	1.41	2.125	O	2.53
4.583	0.00	1.24	2.116	O	2.52
4.667	0.00	1.10	2.108	O	2.51
4.750	0.00	0.97	2.101	O	2.50
4.833	0.00	0.95	2.094	O	2.49
4.917	0.00	0.94	2.088	O	2.49
5.000	0.00	0.94	2.081	O	2.48
5.083	0.00	0.94	2.075	O	2.47
5.167	0.00	0.93	2.068	O	2.47
5.250	0.00	0.93	2.062	O	2.46
5.333	0.00	0.92	2.056	O	2.45
5.417	0.00	0.92	2.049	O	2.44
5.500	0.00	0.92	2.043	O	2.44
5.583	0.00	0.91	2.037	O	2.43
5.667	0.00	0.91	2.030	O	2.42
5.750	0.00	0.91	2.024	O	2.42
5.833	0.00	0.90	2.018	O	2.41
5.917	0.00	0.90	2.012	O	2.40
6.000	0.00	0.90	2.005	O	2.40
6.083	0.00	0.89	1.999	O	2.39
6.167	0.00	0.89	1.993	O	2.38
6.250	0.00	0.89	1.987	O	2.38
6.333	0.00	0.88	1.981	O	2.37
6.417	0.00	0.88	1.975	O	2.36
6.500	0.00	0.88	1.969	O	2.36
6.583	0.00	0.87	1.963	O	2.35
6.667	0.00	0.87	1.957	O	2.34
6.750	0.00	0.87	1.951	O	2.34
6.833	0.00	0.86	1.945	O	2.33
6.917	0.00	0.86	1.939	O	2.32
7.000	0.00	0.86	1.933	O	2.32
7.083	0.00	0.85	1.927	O	2.31
7.167	0.00	0.85	1.921	O	2.31
7.250	0.00	0.85	1.915	O	2.30
7.333	0.00	0.84	1.910	O	2.29
7.417	0.00	0.84	1.904	O	2.29
7.500	0.00	0.84	1.898	O	2.28
7.583	0.00	0.83	1.892	O	2.27
7.667	0.00	0.83	1.887	O	2.27
7.750	0.00	0.83	1.881	O	2.26
7.833	0.00	0.82	1.875	O	2.26
7.917	0.00	0.82	1.870	O	2.25
8.000	0.00	0.81	1.864	O	2.24
8.083	0.00	0.81	1.858	O	2.24
8.167	0.00	0.80	1.853	O	2.23
8.250	0.00	0.79	1.847	O	2.22
8.333	0.00	0.79	1.842	O	2.22
8.417	0.00	0.78	1.837	O	2.21
8.500	0.00	0.77	1.831	O	2.21
8.583	0.00	0.77	1.826	O	2.20
8.667	0.00	0.76	1.821	O	2.19
8.750	0.00	0.75	1.815	O	2.19
8.833	0.00	0.75	1.810	O	2.18
8.917	0.00	0.74	1.805	O	2.18
9.000	0.00	0.73	1.800	O	2.17
9.083	0.00	0.73	1.795	O	2.17
9.167	0.00	0.72	1.790	O	2.16
9.250	0.00	0.72	1.785	O	2.15
9.333	0.00	0.71	1.780	O	2.15
9.417	0.00	0.70	1.775	O	2.14
9.500	0.00	0.70	1.770	O	2.14
9.583	0.00	0.69	1.766	O	2.13
9.667	0.00	0.69	1.761	O	2.13
9.750	0.00	0.68	1.756	O	2.12
9.833	0.00	0.68	1.752	O	2.12
9.917	0.00	0.67	1.747	O	2.11
10.000	0.00	0.66	1.742	O	2.11

10.083	0.00	0.66	1.738	O					2.10
10.167	0.00	0.65	1.733	O					2.10
10.250	0.00	0.65	1.729	O					2.09
10.333	0.00	0.64	1.724	O					2.09
10.417	0.00	0.64	1.720	O					2.08
10.500	0.00	0.63	1.716	O					2.08
10.583	0.00	0.63	1.711	O					2.07
10.667	0.00	0.62	1.707	O					2.07
10.750	0.00	0.62	1.703	O					2.06
10.833	0.00	0.61	1.699	O					2.06
10.917	0.00	0.61	1.694	O					2.05
11.000	0.00	0.60	1.690	O					2.05
11.083	0.00	0.59	1.686	O					2.04
11.167	0.00	0.59	1.682	O					2.04
11.250	0.00	0.58	1.678	O					2.04
11.333	0.00	0.58	1.674	O					2.03
11.417	0.00	0.58	1.670	O					2.03
11.500	0.00	0.57	1.666	O					2.02
11.583	0.00	0.57	1.662	O					2.02
11.667	0.00	0.56	1.658	O					2.01
11.750	0.00	0.56	1.654	O					2.01
11.833	0.00	0.55	1.651	O					2.00
11.917	0.00	0.55	1.647	O					2.00
12.000	0.00	0.54	1.643	O					2.00
12.083	0.00	0.54	1.639	O					1.99
12.167	0.00	0.53	1.636	O					1.99
12.250	0.00	0.53	1.632	O					1.98
12.333	0.00	0.52	1.628	O					1.98
12.417	0.00	0.52	1.625	O					1.98
12.500	0.00	0.52	1.621	O					1.97
12.583	0.00	0.51	1.618	O					1.97
12.667	0.00	0.51	1.614	O					1.96
12.750	0.00	0.50	1.611	O					1.96
12.833	0.00	0.50	1.607	O					1.96
12.917	0.00	0.49	1.604	O					1.95
13.000	0.00	0.49	1.600	O					1.95
13.083	0.00	0.49	1.597	O					1.94
13.167	0.00	0.48	1.594	O					1.94
13.250	0.00	0.48	1.590	O					1.94
13.333	0.00	0.47	1.587	O					1.93
13.417	0.00	0.47	1.584	O					1.93
13.500	0.00	0.47	1.581	O					1.93
13.583	0.00	0.46	1.577	O					1.92
13.667	0.00	0.46	1.574	O					1.92
13.750	0.00	0.45	1.571	O					1.92
13.833	0.00	0.45	1.568	O					1.91
13.917	0.00	0.45	1.565	O					1.91
14.000	0.00	0.44	1.562	O					1.91
14.083	0.00	0.44	1.559	O					1.90
14.167	0.00	0.44	1.556	O					1.90
14.250	0.00	0.43	1.553	O					1.89
14.333	0.00	0.43	1.550	O					1.89
14.417	0.00	0.42	1.547	O					1.89
14.500	0.00	0.42	1.544	O					1.89
14.583	0.00	0.42	1.541	O					1.88
14.667	0.00	0.41	1.538	O					1.88
14.750	0.00	0.41	1.535	O					1.88
14.833	0.00	0.41	1.533	O					1.87
14.917	0.00	0.40	1.530	O					1.87
15.000	0.00	0.40	1.527	O					1.87
15.083	0.00	0.40	1.524	O					1.86
15.167	0.00	0.39	1.522	O					1.86
15.250	0.00	0.39	1.519	O					1.86
15.333	0.00	0.39	1.516	O					1.85
15.417	0.00	0.38	1.514	O					1.85
15.500	0.00	0.38	1.511	O					1.85
15.583	0.00	0.38	1.508	O					1.85
15.667	0.00	0.37	1.506	O					1.84
15.750	0.00	0.37	1.503	O					1.84
15.833	0.00	0.37	1.501	O					1.84
15.917	0.00	0.36	1.498	O					1.83
16.000	0.00	0.36	1.496	O					1.83
16.083	0.00	0.36	1.493	O					1.83
16.167	0.00	0.36	1.491	O					1.83
16.250	0.00	0.35	1.488	O					1.82
16.333	0.00	0.35	1.486	O					1.82
16.417	0.00	0.35	1.483	O					1.82
16.500	0.00	0.34	1.481	O					1.81
16.583	0.00	0.34	1.479	O					1.81
16.667	0.00	0.34	1.476	O					1.81
16.750	0.00	0.34	1.474	O					1.81
16.833	0.00	0.33	1.472	O					1.80
16.917	0.00	0.33	1.469	O					1.80
17.000	0.00	0.33	1.467	O					1.80
17.083	0.00	0.32	1.465	O					1.80
17.167	0.00	0.32	1.463	O					1.79
17.250	0.00	0.32	1.461	O					1.79
17.333	0.00	0.32	1.458	O					1.79
17.417	0.00	0.31	1.456	O					1.79
17.500	0.00	0.31	1.454	O					1.78
17.583	0.00	0.31	1.452	O					1.78
17.667	0.00	0.31	1.450	O					1.78
17.750	0.00	0.30	1.448	O					1.78
17.833	0.00	0.30	1.446	O					1.77
17.917	0.00	0.30	1.444	O					1.77
18.000	0.00	0.30	1.441	O					1.77
18.083	0.00	0.29	1.439	O					1.77

18.167	0.00	0.29	1.437	O					1.77
18.250	0.00	0.29	1.435	O					1.76
18.333	0.00	0.29	1.433	O					1.76
18.417	0.00	0.28	1.432	O					1.76
18.500	0.00	0.28	1.430	O					1.76
18.583	0.00	0.28	1.428	O					1.75
18.667	0.00	0.28	1.426	O					1.75
18.750	0.00	0.27	1.424	O					1.75
18.833	0.00	0.27	1.422	O					1.75
18.917	0.00	0.27	1.420	O					1.75
19.000	0.00	0.27	1.418	O					1.74
19.083	0.00	0.26	1.416	O					1.74
19.167	0.00	0.26	1.415	O					1.74
19.250	0.00	0.26	1.413	O					1.74
19.333	0.00	0.26	1.411	O					1.74
19.417	0.00	0.26	1.409	O					1.73
19.500	0.00	0.25	1.407	O					1.73
19.583	0.00	0.25	1.406	O					1.73
19.667	0.00	0.25	1.404	O					1.73
19.750	0.00	0.25	1.402	O					1.73
19.833	0.00	0.25	1.401	O					1.72
19.917	0.00	0.24	1.399	O					1.72
20.000	0.00	0.24	1.397	O					1.72
20.083	0.00	0.24	1.396	O					1.72
20.167	0.00	0.24	1.394	O					1.72
20.250	0.00	0.24	1.392	O					1.72
20.333	0.00	0.23	1.391	O					1.71
20.417	0.00	0.23	1.389	O					1.71
20.500	0.00	0.23	1.388	O					1.71
20.583	0.00	0.23	1.386	O					1.71
20.667	0.00	0.23	1.384	O					1.71
20.750	0.00	0.22	1.383	O					1.70
20.833	0.00	0.22	1.381	O					1.70
20.917	0.00	0.22	1.380	O					1.70
21.000	0.00	0.22	1.378	O					1.70
21.083	0.00	0.22	1.377	O					1.70
21.167	0.00	0.21	1.375	O					1.70
21.250	0.00	0.21	1.374	O					1.69
21.333	0.00	0.21	1.372	O					1.69
21.417	0.00	0.21	1.371	O					1.69
21.500	0.00	0.21	1.369	O					1.69
21.583	0.00	0.21	1.368	O					1.69
21.667	0.00	0.20	1.367	O					1.69
21.750	0.00	0.20	1.365	O					1.68
21.833	0.00	0.20	1.364	O					1.68
21.917	0.00	0.20	1.362	O					1.68
22.000	0.00	0.20	1.361	O					1.68
22.083	0.00	0.20	1.360	O					1.68
22.167	0.00	0.19	1.358	O					1.68
22.250	0.00	0.19	1.357	O					1.68
22.333	0.00	0.19	1.356	O					1.67
22.417	0.00	0.19	1.354	O					1.67
22.500	0.00	0.19	1.353	O					1.67
22.583	0.00	0.19	1.352	O					1.67
22.667	0.00	0.18	1.351	O					1.67
22.750	0.00	0.18	1.349	O					1.67
22.833	0.00	0.18	1.348	O					1.67
22.917	0.00	0.18	1.347	O					1.66
23.000	0.00	0.18	1.346	O					1.66
23.083	0.00	0.18	1.344	O					1.66
23.167	0.00	0.18	1.343	O					1.66
23.250	0.00	0.17	1.342	O					1.66
23.333	0.00	0.17	1.341	O					1.66
23.417	0.00	0.17	1.340	O					1.66
23.500	0.00	0.17	1.338	O					1.65
23.583	0.00	0.17	1.337	O					1.65
23.667	0.00	0.17	1.336	O					1.65
23.750	0.00	0.17	1.335	O					1.65
23.833	0.00	0.16	1.334	O					1.65
23.917	0.00	0.16	1.333	O					1.65
24.000	0.00	0.16	1.332	O					1.65
24.083	0.00	0.16	1.331	O					1.65
24.167	0.00	0.16	1.329	O					1.64
24.250	0.00	0.16	1.328	O					1.64
24.333	0.00	0.16	1.327	O					1.64
24.417	0.00	0.15	1.326	O					1.64
24.500	0.00	0.15	1.325	O					1.64
24.583	0.00	0.15	1.324	O					1.64
24.667	0.00	0.15	1.323	O					1.64
24.750	0.00	0.15	1.322	O					1.64
24.833	0.00	0.15	1.321	O					1.64
24.917	0.00	0.15	1.320	O					1.63
25.000	0.00	0.15	1.319	O					1.63
25.083	0.00	0.14	1.318	O					1.63
25.167	0.00	0.14	1.317	O					1.63
25.250	0.00	0.14	1.316	O					1.63
25.333	0.00	0.14	1.315	O					1.63
25.417	0.00	0.14	1.314	O					1.63
25.500	0.00	0.14	1.313	O					1.63
25.583	0.00	0.14	1.312	O					1.63
25.667	0.00	0.14	1.311	O					1.62
25.750	0.00	0.13	1.310	O					1.62
25.833	0.00	0.13	1.309	O					1.62
25.917	0.00	0.13	1.308	O					1.62
26.000	0.00	0.13	1.308	O					1.62
26.083	0.00	0.13	1.307	O					1.62
26.167	0.00	0.13	1.306	O					1.62

26.250	0.00	0.13	1.305	O					1.62
26.333	0.00	0.13	1.304	O					1.62
26.417	0.00	0.13	1.303	O					1.62
26.500	0.00	0.13	1.302	O					1.61
26.583	0.00	0.12	1.301	O					1.61
26.667	0.00	0.12	1.300	O					1.61
26.750	0.00	0.12	1.300	O					1.61
26.833	0.00	0.12	1.299	O					1.61
26.917	0.00	0.12	1.298	O					1.61
27.000	0.00	0.12	1.297	O					1.61
27.083	0.00	0.12	1.296	O					1.61
27.167	0.00	0.12	1.296	O					1.61
27.250	0.00	0.12	1.295	O					1.61
27.333	0.00	0.11	1.294	O					1.61
27.417	0.00	0.11	1.293	O					1.60
27.500	0.00	0.11	1.292	O					1.60
27.583	0.00	0.11	1.292	O					1.60
27.667	0.00	0.11	1.291	O					1.60
27.750	0.00	0.11	1.290	O					1.60
27.833	0.00	0.11	1.289	O					1.60
27.917	0.00	0.11	1.289	O					1.60
28.000	0.00	0.11	1.288	O					1.60
28.083	0.00	0.11	1.287	O					1.60
28.167	0.00	0.11	1.286	O					1.60
28.250	0.00	0.10	1.286	O					1.60
28.333	0.00	0.10	1.285	O					1.60
28.417	0.00	0.10	1.284	O					1.59
28.500	0.00	0.10	1.283	O					1.59
28.583	0.00	0.10	1.283	O					1.59
28.667	0.00	0.10	1.282	O					1.59
28.750	0.00	0.10	1.281	O					1.59
28.833	0.00	0.10	1.281	O					1.59
28.917	0.00	0.10	1.280	O					1.59
29.000	0.00	0.10	1.279	O					1.59
29.083	0.00	0.10	1.279	O					1.59
29.167	0.00	0.10	1.278	O					1.59
29.250	0.00	0.09	1.277	O					1.59
29.333	0.00	0.09	1.277	O					1.59
29.417	0.00	0.09	1.276	O					1.59
29.500	0.00	0.09	1.275	O					1.58
29.583	0.00	0.09	1.275	O					1.58
29.667	0.00	0.09	1.274	O					1.58
29.750	0.00	0.09	1.274	O					1.58
29.833	0.00	0.09	1.273	O					1.58
29.917	0.00	0.09	1.272	O					1.58
30.000	0.00	0.09	1.272	O					1.58
30.083	0.00	0.09	1.271	O					1.58
30.167	0.00	0.09	1.271	O					1.58
30.250	0.00	0.09	1.270	O					1.58
30.333	0.00	0.08	1.269	O					1.58
30.417	0.00	0.08	1.269	O					1.58
30.500	0.00	0.08	1.268	O					1.58
30.583	0.00	0.08	1.268	O					1.58
30.667	0.00	0.08	1.267	O					1.58
30.750	0.00	0.08	1.266	O					1.57
30.833	0.00	0.08	1.266	O					1.57
30.917	0.00	0.08	1.265	O					1.57
31.000	0.00	0.08	1.265	O					1.57
31.083	0.00	0.08	1.264	O					1.57
31.167	0.00	0.08	1.264	O					1.57
31.250	0.00	0.08	1.263	O					1.57
31.333	0.00	0.08	1.263	O					1.57
31.417	0.00	0.08	1.262	O					1.57
31.500	0.00	0.08	1.262	O					1.57
31.583	0.00	0.07	1.261	O					1.57
31.667	0.00	0.07	1.261	O					1.57
31.750	0.00	0.07	1.260	O					1.57
31.833	0.00	0.07	1.260	O					1.57
31.917	0.00	0.07	1.259	O					1.57
32.000	0.00	0.07	1.259	O					1.57
32.083	0.00	0.07	1.258	O					1.57
32.167	0.00	0.07	1.258	O					1.56
32.250	0.00	0.07	1.257	O					1.56
32.333	0.00	0.07	1.257	O					1.56
32.417	0.00	0.07	1.256	O					1.56
32.500	0.00	0.07	1.256	O					1.56
32.583	0.00	0.07	1.255	O					1.56
32.667	0.00	0.07	1.255	O					1.56
32.750	0.00	0.07	1.254	O					1.56
32.833	0.00	0.07	1.254	O					1.56
32.917	0.00	0.07	1.253	O					1.56
33.000	0.00	0.06	1.253	O					1.56
33.083	0.00	0.06	1.253	O					1.56
33.167	0.00	0.06	1.252	O					1.56
33.250	0.00	0.06	1.252	O					1.56
33.333	0.00	0.06	1.251	O					1.56
33.417	0.00	0.06	1.251	O					1.56
33.500	0.00	0.06	1.250	O					1.56
33.583	0.00	0.06	1.250	O					1.56
33.667	0.00	0.06	1.250	O					1.56
33.750	0.00	0.06	1.249	O					1.55
33.833	0.00	0.06	1.249	O					1.55
33.917	0.00	0.06	1.248	O					1.55
34.000	0.00	0.06	1.248	O					1.55
34.083	0.00	0.06	1.247	O					1.55
34.167	0.00	0.06	1.247	O					1.55
34.250	0.00	0.06	1.247	O					1.55

34.333	0.00	0.06	1.246	O					1.55
34.417	0.00	0.06	1.246	O					1.55
34.500	0.00	0.06	1.246	O					1.55
34.583	0.00	0.06	1.245	O					1.55
34.667	0.00	0.05	1.245	O					1.55
34.750	0.00	0.05	1.244	O					1.55
34.833	0.00	0.05	1.244	O					1.55
34.917	0.00	0.05	1.244	O					1.55
35.000	0.00	0.05	1.243	O					1.55
35.083	0.00	0.05	1.243	O					1.55
35.167	0.00	0.05	1.243	O					1.55
35.250	0.00	0.05	1.242	O					1.55
35.333	0.00	0.05	1.242	O					1.55
35.417	0.00	0.05	1.241	O					1.55
35.500	0.00	0.05	1.241	O					1.55
35.583	0.00	0.05	1.241	O					1.55
35.667	0.00	0.05	1.240	O					1.55
35.750	0.00	0.05	1.240	O					1.54
35.833	0.00	0.05	1.240	O					1.54
35.917	0.00	0.05	1.239	O					1.54
36.000	0.00	0.05	1.239	O					1.54
36.083	0.00	0.05	1.239	O					1.54
36.167	0.00	0.05	1.238	O					1.54
36.250	0.00	0.05	1.238	O					1.54
36.333	0.00	0.05	1.238	O					1.54
36.417	0.00	0.05	1.237	O					1.54
36.500	0.00	0.05	1.237	O					1.54
36.583	0.00	0.05	1.237	O					1.54
36.667	0.00	0.04	1.237	O					1.54
36.750	0.00	0.04	1.236	O					1.54
36.833	0.00	0.04	1.236	O					1.54
36.917	0.00	0.04	1.236	O					1.54
37.000	0.00	0.04	1.235	O					1.54
37.083	0.00	0.04	1.235	O					1.54
37.167	0.00	0.04	1.235	O					1.54
37.250	0.00	0.04	1.234	O					1.54
37.333	0.00	0.04	1.234	O					1.54
37.417	0.00	0.04	1.234	O					1.54
37.500	0.00	0.04	1.234	O					1.54
37.583	0.00	0.04	1.233	O					1.54
37.667	0.00	0.04	1.233	O					1.54
37.750	0.00	0.04	1.233	O					1.54
37.833	0.00	0.04	1.232	O					1.54
37.917	0.00	0.04	1.232	O					1.54
38.000	0.00	0.04	1.232	O					1.54
38.083	0.00	0.04	1.232	O					1.54
38.167	0.00	0.04	1.231	O					1.54
38.250	0.00	0.04	1.231	O					1.53
38.333	0.00	0.04	1.231	O					1.53
38.417	0.00	0.04	1.231	O					1.53
38.500	0.00	0.04	1.230	O					1.53
38.583	0.00	0.04	1.230	O					1.53
38.667	0.00	0.04	1.230	O					1.53
38.750	0.00	0.04	1.230	O					1.53
38.833	0.00	0.04	1.229	O					1.53
38.917	0.00	0.04	1.229	O					1.53
39.000	0.00	0.04	1.229	O					1.53
39.083	0.00	0.04	1.229	O					1.53
39.167	0.00	0.03	1.228	O					1.53
39.250	0.00	0.03	1.228	O					1.53
39.333	0.00	0.03	1.228	O					1.53
39.417	0.00	0.03	1.228	O					1.53
39.500	0.00	0.03	1.227	O					1.53
39.583	0.00	0.03	1.227	O					1.53
39.667	0.00	0.03	1.227	O					1.53
39.750	0.00	0.03	1.227	O					1.53
39.833	0.00	0.03	1.227	O					1.53
39.917	0.00	0.03	1.226	O					1.53
40.000	0.00	0.03	1.226	O					1.53
40.083	0.00	0.03	1.226	O					1.53
40.167	0.00	0.03	1.226	O					1.53
40.250	0.00	0.03	1.225	O					1.53
40.333	0.00	0.03	1.225	O					1.53
40.417	0.00	0.03	1.225	O					1.53
40.500	0.00	0.03	1.225	O					1.53
40.583	0.00	0.03	1.225	O					1.53
40.667	0.00	0.03	1.224	O					1.53
40.750	0.00	0.03	1.224	O					1.53
40.833	0.00	0.03	1.224	O					1.53
40.917	0.00	0.03	1.224	O					1.53
41.000	0.00	0.03	1.224	O					1.53
41.083	0.00	0.03	1.223	O					1.53
41.167	0.00	0.03	1.223	O					1.53
41.250	0.00	0.03	1.223	O					1.53
41.333	0.00	0.03	1.223	O					1.53
41.417	0.00	0.03	1.223	O					1.53
41.500	0.00	0.03	1.222	O					1.53
41.583	0.00	0.03	1.222	O					1.52
41.667	0.00	0.03	1.222	O					1.52
41.750	0.00	0.03	1.222	O					1.52
41.833	0.00	0.03	1.222	O					1.52
41.917	0.00	0.03	1.221	O					1.52
42.000	0.00	0.03	1.221	O					1.52
42.083	0.00	0.03	1.221	O					1.52
42.167	0.00	0.03	1.221	O					1.52
42.250	0.00	0.03	1.221	O					1.52
42.333	0.00	0.03	1.221	O					1.52

42.417	0.00	0.03	1.220	O					1.52
42.500	0.00	0.02	1.220	O					1.52
42.583	0.00	0.02	1.220	O					1.52
42.667	0.00	0.02	1.220	O					1.52
42.750	0.00	0.02	1.220	O					1.52
42.833	0.00	0.02	1.220	O					1.52
42.917	0.00	0.02	1.219	O					1.52
43.000	0.00	0.02	1.219	O					1.52
43.083	0.00	0.02	1.219	O					1.52
43.167	0.00	0.02	1.219	O					1.52
43.250	0.00	0.02	1.219	O					1.52
43.333	0.00	0.02	1.219	O					1.52
43.417	0.00	0.02	1.218	O					1.52
43.500	0.00	0.02	1.218	O					1.52
43.583	0.00	0.02	1.218	O					1.52
43.667	0.00	0.02	1.218	O					1.52
43.750	0.00	0.02	1.218	O					1.52
43.833	0.00	0.02	1.218	O					1.52
43.917	0.00	0.02	1.218	O					1.52
44.000	0.00	0.02	1.217	O					1.52
44.083	0.00	0.02	1.217	O					1.52
44.167	0.00	0.02	1.217	O					1.52
44.250	0.00	0.02	1.217	O					1.52
44.333	0.00	0.02	1.217	O					1.52
44.417	0.00	0.02	1.217	O					1.52
44.500	0.00	0.02	1.217	O					1.52
44.583	0.00	0.02	1.216	O					1.52
44.667	0.00	0.02	1.216	O					1.52
44.750	0.00	0.02	1.216	O					1.52
44.833	0.00	0.02	1.216	O					1.52
44.917	0.00	0.02	1.216	O					1.52
45.000	0.00	0.02	1.216	O					1.52
45.083	0.00	0.02	1.216	O					1.52
45.167	0.00	0.02	1.215	O					1.52
45.250	0.00	0.02	1.215	O					1.52
45.333	0.00	0.02	1.215	O					1.52
45.417	0.00	0.02	1.215	O					1.52
45.500	0.00	0.02	1.215	O					1.52
45.583	0.00	0.02	1.215	O					1.52
45.667	0.00	0.02	1.215	O					1.52
45.750	0.00	0.02	1.215	O					1.52
45.833	0.00	0.02	1.214	O					1.52
45.917	0.00	0.02	1.214	O					1.52
46.000	0.00	0.02	1.214	O					1.52
46.083	0.00	0.02	1.214	O					1.52
46.167	0.00	0.02	1.214	O					1.52
46.250	0.00	0.02	1.214	O					1.52
46.333	0.00	0.02	1.214	O					1.52
46.417	0.00	0.02	1.214	O					1.52
46.500	0.00	0.02	1.214	O					1.52
46.583	0.00	0.02	1.213	O					1.52
46.667	0.00	0.02	1.213	O					1.51
46.750	0.00	0.02	1.213	O					1.51
46.833	0.00	0.02	1.213	O					1.51
46.917	0.00	0.02	1.213	O					1.51
47.000	0.00	0.02	1.213	O					1.51
47.083	0.00	0.02	1.213	O					1.51
47.167	0.00	0.02	1.213	O					1.51
47.250	0.00	0.02	1.213	O					1.51
47.333	0.00	0.02	1.212	O					1.51
47.417	0.00	0.02	1.212	O					1.51
47.500	0.00	0.01	1.212	O					1.51
47.583	0.00	0.01	1.212	O					1.51
47.667	0.00	0.01	1.212	O					1.51
47.750	0.00	0.01	1.212	O					1.51
47.833	0.00	0.01	1.212	O					1.51
47.917	0.00	0.01	1.212	O					1.51
48.000	0.00	0.01	1.212	O					1.51
48.083	0.00	0.01	1.212	O					1.51
48.167	0.00	0.01	1.211	O					1.51
48.250	0.00	0.01	1.211	O					1.51
48.333	0.00	0.01	1.211	O					1.51
48.417	0.00	0.01	1.211	O					1.51
48.500	0.00	0.01	1.211	O					1.51
48.583	0.00	0.01	1.211	O					1.51
48.667	0.00	0.01	1.211	O					1.51
48.750	0.00	0.01	1.211	O					1.51
48.833	0.00	0.01	1.211	O					1.51
48.917	0.00	0.01	1.211	O					1.51
49.000	0.00	0.01	1.210	O					1.51
49.083	0.00	0.01	1.210	O					1.51
49.167	0.00	0.01	1.210	O					1.51
49.250	0.00	0.01	1.210	O					1.51
49.333	0.00	0.01	1.210	O					1.51
49.417	0.00	0.01	1.210	O					1.51
49.500	0.00	0.01	1.210	O					1.51
49.583	0.00	0.01	1.210	O					1.51
49.667	0.00	0.01	1.210	O					1.51
49.750	0.00	0.01	1.210	O					1.51
49.833	0.00	0.01	1.210	O					1.51
49.917	0.00	0.01	1.210	O					1.51
50.000	0.00	0.01	1.209	O					1.51
50.083	0.00	0.01	1.209	O					1.51
50.167	0.00	0.01	1.209	O					1.51
50.250	0.00	0.01	1.209	O					1.51
50.333	0.00	0.01	1.209	O					1.51
50.417	0.00	0.01	1.209	O					1.51

50.500	0.00	0.01	1.209	O					1.51
50.583	0.00	0.01	1.209	O					1.51
50.667	0.00	0.01	1.209	O					1.51
50.750	0.00	0.01	1.209	O					1.51
50.833	0.00	0.01	1.209	O					1.51
50.917	0.00	0.01	1.209	O					1.51
51.000	0.00	0.01	1.209	O					1.51
51.083	0.00	0.01	1.209	O					1.51
51.167	0.00	0.01	1.208	O					1.51
51.250	0.00	0.01	1.208	O					1.51
51.333	0.00	0.01	1.208	O					1.51
51.417	0.00	0.01	1.208	O					1.51
51.500	0.00	0.01	1.208	O					1.51
51.583	0.00	0.01	1.208	O					1.51
51.667	0.00	0.01	1.208	O					1.51
51.750	0.00	0.01	1.208	O					1.51
51.833	0.00	0.01	1.208	O					1.51
51.917	0.00	0.01	1.208	O					1.51
52.000	0.00	0.01	1.208	O					1.51
52.083	0.00	0.01	1.208	O					1.51
52.167	0.00	0.01	1.208	O					1.51
52.250	0.00	0.01	1.208	O					1.51
52.333	0.00	0.01	1.207	O					1.51
52.417	0.00	0.01	1.207	O					1.51
52.500	0.00	0.01	1.207	O					1.51
52.583	0.00	0.01	1.207	O					1.51
52.667	0.00	0.01	1.207	O					1.51
52.750	0.00	0.01	1.207	O					1.51
52.833	0.00	0.01	1.207	O					1.51
52.917	0.00	0.01	1.207	O					1.51
53.000	0.00	0.01	1.207	O					1.51
53.083	0.00	0.01	1.207	O					1.51
53.167	0.00	0.01	1.207	O					1.51
53.250	0.00	0.01	1.207	O					1.51
53.333	0.00	0.01	1.207	O					1.51
53.417	0.00	0.01	1.207	O					1.51
53.500	0.00	0.01	1.207	O					1.51
53.583	0.00	0.01	1.207	O					1.51
53.667	0.00	0.01	1.207	O					1.51
53.750	0.00	0.01	1.206	O					1.51
53.833	0.00	0.01	1.206	O					1.51
53.917	0.00	0.01	1.206	O					1.51
54.000	0.00	0.01	1.206	O					1.51
54.083	0.00	0.01	1.206	O					1.51
54.167	0.00	0.01	1.206	O					1.51
54.250	0.00	0.01	1.206	O					1.51
54.333	0.00	0.01	1.206	O					1.51
54.417	0.00	0.01	1.206	O					1.51
54.500	0.00	0.01	1.206	O					1.51
54.583	0.00	0.01	1.206	O					1.51
54.667	0.00	0.01	1.206	O					1.51
54.750	0.00	0.01	1.206	O					1.51
54.833	0.00	0.01	1.206	O					1.51
54.917	0.00	0.01	1.206	O					1.51
55.000	0.00	0.01	1.206	O					1.51
55.083	0.00	0.01	1.206	O					1.51
55.167	0.00	0.01	1.206	O					1.51
55.250	0.00	0.01	1.206	O					1.51
55.333	0.00	0.01	1.206	O					1.51
55.417	0.00	0.01	1.205	O					1.51
55.500	0.00	0.01	1.205	O					1.51
55.583	0.00	0.01	1.205	O					1.51
55.667	0.00	0.01	1.205	O					1.51
55.750	0.00	0.01	1.205	O					1.51
55.833	0.00	0.01	1.205	O					1.51
55.917	0.00	0.01	1.205	O					1.51
56.000	0.00	0.01	1.205	O					1.51
56.083	0.00	0.01	1.205	O					1.51
56.167	0.00	0.01	1.205	O					1.51
56.250	0.00	0.01	1.205	O					1.51
56.333	0.00	0.01	1.205	O					1.51
56.417	0.00	0.01	1.205	O					1.51
56.500	0.00	0.01	1.205	O					1.51
56.583	0.00	0.01	1.205	O					1.51
56.667	0.00	0.01	1.205	O					1.51
56.750	0.00	0.01	1.205	O					1.51
56.833	0.00	0.01	1.205	O					1.51
56.917	0.00	0.01	1.205	O					1.51
57.000	0.00	0.01	1.205	O					1.51
57.083	0.00	0.01	1.205	O					1.51
57.167	0.00	0.01	1.205	O					1.51
57.250	0.00	0.01	1.205	O					1.51
57.333	0.00	0.01	1.205	O					1.51
57.417	0.00	0.01	1.204	O					1.51
57.500	0.00	0.01	1.204	O					1.50
57.583	0.00	0.01	1.204	O					1.50
57.667	0.00	0.01	1.204	O					1.50
57.750	0.00	0.01	1.204	O					1.50
57.833	0.00	0.01	1.204	O					1.50
57.917	0.00	0.01	1.204	O					1.50
58.000	0.00	0.01	1.204	O					1.50
58.083	0.00	0.01	1.204	O					1.50
58.167	0.00	0.01	1.204	O					1.50
58.250	0.00	0.01	1.204	O					1.50
58.333	0.00	0.00	1.204	O					1.50
58.417	0.00	0.00	1.204	O					1.50
58.500	0.00	0.00	1.204	O					1.50

58.583	0.00	0.00	1.204	O					1.50
58.667	0.00	0.00	1.204	O					1.50
58.750	0.00	0.00	1.204	O					1.50
58.833	0.00	0.00	1.204	O					1.50
58.917	0.00	0.00	1.204	O					1.50
59.000	0.00	0.00	1.204	O					1.50
59.083	0.00	0.00	1.204	O					1.50
59.167	0.00	0.00	1.204	O					1.50
59.250	0.00	0.00	1.204	O					1.50
59.333	0.00	0.00	1.204	O					1.50
59.417	0.00	0.00	1.204	O					1.50
59.500	0.00	0.00	1.204	O					1.50
59.583	0.00	0.00	1.204	O					1.50
59.667	0.00	0.00	1.204	O					1.50
59.750	0.00	0.00	1.204	O					1.50
59.833	0.00	0.00	1.204	O					1.50
59.917	0.00	0.00	1.203	O					1.50
60.000	0.00	0.00	1.203	O					1.50
60.083	0.00	0.00	1.203	O					1.50
60.167	0.00	0.00	1.203	O					1.50
60.250	0.00	0.00	1.203	O					1.50
60.333	0.00	0.00	1.203	O					1.50
60.417	0.00	0.00	1.203	O					1.50
60.500	0.00	0.00	1.203	O					1.50
60.583	0.00	0.00	1.203	O					1.50
60.667	0.00	0.00	1.203	O					1.50
60.750	0.00	0.00	1.203	O					1.50
60.833	0.00	0.00	1.203	O					1.50
60.917	0.00	0.00	1.203	O					1.50
61.000	0.00	0.00	1.203	O					1.50
61.083	0.00	0.00	1.203	O					1.50
61.167	0.00	0.00	1.203	O					1.50
61.250	0.00	0.00	1.203	O					1.50
61.333	0.00	0.00	1.203	O					1.50
61.417	0.00	0.00	1.203	O					1.50
61.500	0.00	0.00	1.203	O					1.50
61.583	0.00	0.00	1.203	O					1.50
61.667	0.00	0.00	1.203	O					1.50
61.750	0.00	0.00	1.203	O					1.50
61.833	0.00	0.00	1.203	O					1.50
61.917	0.00	0.00	1.203	O					1.50
62.000	0.00	0.00	1.203	O					1.50
62.083	0.00	0.00	1.203	O					1.50
62.167	0.00	0.00	1.203	O					1.50
62.250	0.00	0.00	1.203	O					1.50
62.333	0.00	0.00	1.203	O					1.50
62.417	0.00	0.00	1.203	O					1.50
62.500	0.00	0.00	1.203	O					1.50
62.583	0.00	0.00	1.203	O					1.50
62.667	0.00	0.00	1.203	O					1.50
62.750	0.00	0.00	1.203	O					1.50
62.833	0.00	0.00	1.203	O					1.50
62.917	0.00	0.00	1.203	O					1.50
63.000	0.00	0.00	1.203	O					1.50
63.083	0.00	0.00	1.203	O					1.50
63.167	0.00	0.00	1.203	O					1.50
63.250	0.00	0.00	1.202	O					1.50
63.333	0.00	0.00	1.202	O					1.50
63.417	0.00	0.00	1.202	O					1.50
63.500	0.00	0.00	1.202	O					1.50
63.583	0.00	0.00	1.202	O					1.50
63.667	0.00	0.00	1.202	O					1.50
63.750	0.00	0.00	1.202	O					1.50
63.833	0.00	0.00	1.202	O					1.50
63.917	0.00	0.00	1.202	O					1.50
64.000	0.00	0.00	1.202	O					1.50
64.083	0.00	0.00	1.202	O					1.50
64.167	0.00	0.00	1.202	O					1.50
64.250	0.00	0.00	1.202	O					1.50
64.333	0.00	0.00	1.202	O					1.50
64.417	0.00	0.00	1.202	O					1.50
64.500	0.00	0.00	1.202	O					1.50
64.583	0.00	0.00	1.202	O					1.50
64.667	0.00	0.00	1.202	O					1.50
64.750	0.00	0.00	1.202	O					1.50
64.833	0.00	0.00	1.202	O					1.50
64.917	0.00	0.00	1.202	O					1.50
65.000	0.00	0.00	1.202	O					1.50
65.083	0.00	0.00	1.202	O					1.50
65.167	0.00	0.00	1.202	O					1.50
65.250	0.00	0.00	1.202	O					1.50
65.333	0.00	0.00	1.202	O					1.50
65.417	0.00	0.00	1.202	O					1.50
65.500	0.00	0.00	1.202	O					1.50
65.583	0.00	0.00	1.202	O					1.50
65.667	0.00	0.00	1.202	O					1.50
65.750	0.00	0.00	1.202	O					1.50
65.833	0.00	0.00	1.202	O					1.50
65.917	0.00	0.00	1.202	O					1.50
66.000	0.00	0.00	1.202	O					1.50
66.083	0.00	0.00	1.202	O					1.50
66.167	0.00	0.00	1.202	O					1.50
66.250	0.00	0.00	1.202	O					1.50
66.333	0.00	0.00	1.202	O					1.50
66.417	0.00	0.00	1.202	O					1.50
66.500	0.00	0.00	1.202	O					1.50
66.583	0.00	0.00	1.202	O					1.50

66.667	0.00	0.00	1.202	O					1.50
66.750	0.00	0.00	1.202	O					1.50
66.833	0.00	0.00	1.202	O					1.50
66.917	0.00	0.00	1.202	O					1.50
67.000	0.00	0.00	1.202	O					1.50
67.083	0.00	0.00	1.202	O					1.50
67.167	0.00	0.00	1.202	O					1.50
67.250	0.00	0.00	1.202	O					1.50
67.333	0.00	0.00	1.202	O					1.50
67.417	0.00	0.00	1.202	O					1.50
67.500	0.00	0.00	1.202	O					1.50
67.583	0.00	0.00	1.202	O					1.50
67.667	0.00	0.00	1.202	O					1.50
67.750	0.00	0.00	1.202	O					1.50
67.833	0.00	0.00	1.202	O					1.50
67.917	0.00	0.00	1.202	O					1.50
68.000	0.00	0.00	1.202	O					1.50
68.083	0.00	0.00	1.202	O					1.50
68.167	0.00	0.00	1.202	O					1.50
68.250	0.00	0.00	1.201	O					1.50
68.333	0.00	0.00	1.201	O					1.50
68.417	0.00	0.00	1.201	O					1.50
68.500	0.00	0.00	1.201	O					1.50
68.583	0.00	0.00	1.201	O					1.50
68.667	0.00	0.00	1.201	O					1.50
68.750	0.00	0.00	1.201	O					1.50
68.833	0.00	0.00	1.201	O					1.50
68.917	0.00	0.00	1.201	O					1.50
69.000	0.00	0.00	1.201	O					1.50
69.083	0.00	0.00	1.201	O					1.50
69.167	0.00	0.00	1.201	O					1.50
69.250	0.00	0.00	1.201	O					1.50
69.333	0.00	0.00	1.201	O					1.50
69.417	0.00	0.00	1.201	O					1.50
69.500	0.00	0.00	1.201	O					1.50
69.583	0.00	0.00	1.201	O					1.50
69.667	0.00	0.00	1.201	O					1.50
69.750	0.00	0.00	1.201	O					1.50
69.833	0.00	0.00	1.201	O					1.50
69.917	0.00	0.00	1.201	O					1.50
70.000	0.00	0.00	1.201	O					1.50
70.083	0.00	0.00	1.201	O					1.50
70.167	0.00	0.00	1.201	O					1.50
70.250	0.00	0.00	1.201	O					1.50
70.333	0.00	0.00	1.201	O					1.50
70.417	0.00	0.00	1.201	O					1.50
70.500	0.00	0.00	1.201	O					1.50
70.583	0.00	0.00	1.201	O					1.50
70.667	0.00	0.00	1.201	O					1.50
70.750	0.00	0.00	1.201	O					1.50
70.833	0.00	0.00	1.201	O					1.50
70.917	0.00	0.00	1.201	O					1.50
71.000	0.00	0.00	1.201	O					1.50
71.083	0.00	0.00	1.201	O					1.50
71.167	0.00	0.00	1.201	O					1.50
71.250	0.00	0.00	1.201	O					1.50
71.333	0.00	0.00	1.201	O					1.50
71.417	0.00	0.00	1.201	O					1.50
71.500	0.00	0.00	1.201	O					1.50
71.583	0.00	0.00	1.201	O					1.50
71.667	0.00	0.00	1.201	O					1.50
71.750	0.00	0.00	1.201	O					1.50
71.833	0.00	0.00	1.201	O					1.50
71.917	0.00	0.00	1.201	O					1.50
72.000	0.00	0.00	1.201	O					1.50
72.083	0.00	0.00	1.201	O					1.50
72.167	0.00	0.00	1.201	O					1.50
72.250	0.00	0.00	1.201	O					1.50
72.333	0.00	0.00	1.201	O					1.50
72.417	0.00	0.00	1.201	O					1.50
72.500	0.00	0.00	1.201	O					1.50
72.583	0.00	0.00	1.201	O					1.50
72.667	0.00	0.00	1.201	O					1.50
72.750	0.00	0.00	1.201	O					1.50
72.833	0.00	0.00	1.201	O					1.50
72.917	0.00	0.00	1.201	O					1.50
73.000	0.00	0.00	1.201	O					1.50
73.083	0.00	0.00	1.201	O					1.50
73.167	0.00	0.00	1.201	O					1.50
73.250	0.00	0.00	1.201	O					1.50
73.333	0.00	0.00	1.201	O					1.50
73.417	0.00	0.00	1.201	O					1.50
73.500	0.00	0.00	1.201	O					1.50
73.583	0.00	0.00	1.201	O					1.50
73.667	0.00	0.00	1.201	O					1.50
73.750	0.00	0.00	1.201	O					1.50
73.833	0.00	0.00	1.201	O					1.50
73.917	0.00	0.00	1.201	O					1.50
74.000	0.00	0.00	1.201	O					1.50
74.083	0.00	0.00	1.201	O					1.50
74.167	0.00	0.00	1.201	O					1.50
74.250	0.00	0.00	1.201	O					1.50

Remaining water in basin = 1.20 (Ac.Ft)

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**************************HYDROGRAPH DATA**************************
               Number of intervals =   891
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =       12.637 (CFS)
               Total volume =       2.009 (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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FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/02/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
MITIGATION ANALYSIS - 100-YEAR
6-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 3384PBBC6100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 78
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 31.820 (CFS)
Total volume = 4.063 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 78
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
0.250	0.190	0.000	0.190	0.190
1.250	0.990	0.000	0.990	0.990
1.500	1.200	0.000	1.200	1.200
2.250	1.870	0.820	1.867	1.873
2.500	2.100	0.950	2.097	2.103
3.250	2.830	14.350	2.781	2.879
4.250	3.870	21.580	3.796	3.944
5.250	5.020	26.920	4.927	5.113
5.850	5.750	29.660	5.648	5.852

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 8.0 15.91 23.86 31.82	Depth (Ft.)
0.083	0.71	0.00	0.002	O	0.00
0.167	2.15	0.00	0.012	O I	0.02
0.250	2.76	0.00	0.029	O I	0.04
0.333	2.98	0.00	0.049	O I	0.06
0.417	3.10	0.00	0.070	O I	0.09
0.500	3.31	0.00	0.092	O I	0.12
0.583	3.60	0.00	0.116	O I	0.15
0.667	3.68	0.00	0.141	O I	0.19
0.750	3.71	0.00	0.166	O I	0.22
0.833	3.73	0.00	0.192	O I	0.25
0.917	3.74	0.00	0.218	O I	0.28
1.000	3.89	0.00	0.244	O I	0.32
1.083	4.15	0.00	0.272	O I	0.35
1.167	4.21	0.00	0.300	O I	0.39
1.250	4.25	0.00	0.329	O I	0.42
1.333	4.26	0.00	0.359	O I	0.46
1.417	4.27	0.00	0.388	O I	0.50
1.500	4.28	0.00	0.418	O I	0.53
1.583	4.28	0.00	0.447	O I	0.57
1.667	4.28	0.00	0.477	O I	0.61
1.750	4.28	0.00	0.506	O I	0.64
1.833	4.28	0.00	0.535	O I	0.68
1.917	4.28	0.00	0.565	O I	0.72

2.000	4.42	0.00	0.595	O I	0.76
2.083	4.54	0.00	0.626	O I	0.79
2.167	4.49	0.00	0.657	O I	0.83
2.250	4.71	0.00	0.688	O I	0.87
2.333	4.77	0.00	0.721	O I	0.91
2.417	4.79	0.00	0.754	O I	0.96
2.500	4.80	0.00	0.787	O I	1.00
2.583	4.81	0.00	0.820	O I	1.04
2.667	4.81	0.00	0.853	O I	1.08
2.750	4.96	0.00	0.887	O I	1.12
2.833	5.21	0.00	0.922	O I	1.16
2.917	5.28	0.00	0.958	O I	1.21
3.000	5.31	0.00	0.995	O I	1.26
3.083	5.33	0.00	1.031	O I	1.30
3.167	5.48	0.00	1.068	O I	1.34
3.250	5.75	0.00	1.107	O I	1.39
3.333	5.82	0.00	1.147	O I	1.44
3.417	5.99	0.00	1.188	O I	1.49
3.500	6.41	0.04	1.230	O I	1.53
3.583	6.94	0.09	1.276	O I	1.58
3.667	7.39	0.15	1.324	O I	1.64
3.750	7.73	0.21	1.375	O I	1.70
3.833	8.14	0.28	1.428	O I	1.76
3.917	8.47	0.35	1.483	O I	1.82
4.000	8.88	0.42	1.540	O I	1.88
4.083	9.20	0.49	1.599	O I	1.95
4.167	9.80	0.56	1.661	O I	2.02
4.250	10.46	0.64	1.727	O I	2.09
4.333	11.16	0.73	1.796	O I	2.17
4.417	11.87	0.82	1.870	O I	2.25
4.500	12.39	0.86	1.948	O I	2.33
4.583	12.76	0.91	2.029	O I	2.42
4.667	13.39	1.16	2.111	O I	2.51
4.750	14.07	2.66	2.193	O I	2.60
4.833	14.58	4.04	2.268	O I	2.67
4.917	14.93	5.32	2.338	O I	2.74
5.000	15.56	6.50	2.402	O I	2.81
5.083	17.01	7.66	2.466	O I	2.88
5.167	19.88	8.94	2.535	O I	2.95
5.250	22.75	10.41	2.616	O I	3.03
5.333	25.09	12.02	2.703	O I	3.12
5.417	27.74	13.73	2.796	O I	3.22
5.500	31.82	14.86	2.903	O I	3.32
5.583	28.60	15.58	3.006	O I	3.42
5.667	15.09	15.87	3.048	O	3.46
5.750	8.64	15.68	3.021	O	3.43
5.833	5.64	15.28	2.964	I O	3.38
5.917	3.81	14.79	2.893	I O	3.31
6.000	2.37	14.07	2.815	I O	3.23
6.083	1.19	12.61	2.735	I O	3.15
6.167	0.43	11.21	2.659	I O	3.07
6.250	0.20	9.91	2.588	I O	3.00
6.333	0.09	8.75	2.525	I O	2.94
6.417	0.04	7.72	2.469	I O	2.88
6.500	0.01	6.80	2.419	I O	2.83
6.583	0.00	6.00	2.375	I O	2.78
6.667	0.00	5.28	2.336	I O	2.74
6.750	0.00	4.65	2.302	I O	2.71
6.833	0.00	4.10	2.272	I O	2.68
6.917	0.00	3.61	2.245	I O	2.65
7.000	0.00	3.18	2.222	I O	2.63
7.083	0.00	2.81	2.201	I O	2.60
7.167	0.00	2.47	2.183	I O	2.59
7.250	0.00	2.18	2.167	I O	2.57
7.333	0.00	1.92	2.153	IO	2.55
7.417	0.00	1.69	2.140	IO	2.54
7.500	0.00	1.49	2.129	IO	2.53
7.583	0.00	1.31	2.120	IO	2.52
7.667	0.00	1.16	2.111	IO	2.51
7.750	0.00	1.02	2.104	IO	2.50
7.833	0.00	0.95	2.097	O	2.50
7.917	0.00	0.94	2.090	O	2.49
8.000	0.00	0.94	2.084	O	2.48
8.083	0.00	0.94	2.078	O	2.48
8.167	0.00	0.93	2.071	O	2.47
8.250	0.00	0.93	2.065	O	2.46
8.333	0.00	0.93	2.058	O	2.45
8.417	0.00	0.92	2.052	O	2.45
8.500	0.00	0.92	2.046	O	2.44
8.583	0.00	0.92	2.039	O	2.43
8.667	0.00	0.91	2.033	O	2.43
8.750	0.00	0.91	2.027	O	2.42
8.833	0.00	0.91	2.020	O	2.41
8.917	0.00	0.90	2.014	O	2.41
9.000	0.00	0.90	2.008	O	2.40
9.083	0.00	0.89	2.002	O	2.39
9.167	0.00	0.89	1.996	O	2.39
9.250	0.00	0.89	1.990	O	2.38
9.333	0.00	0.88	1.983	O	2.37
9.417	0.00	0.88	1.977	O	2.37
9.500	0.00	0.88	1.971	O	2.36
9.583	0.00	0.87	1.965	O	2.35
9.667	0.00	0.87	1.959	O	2.35
9.750	0.00	0.87	1.953	O	2.34
9.833	0.00	0.86	1.947	O	2.33
9.917	0.00	0.86	1.941	O	2.33
10.000	0.00	0.86	1.935	O	2.32

10.083	0.00	0.85	1.930	O					2.31
10.167	0.00	0.85	1.924	O					2.31
10.250	0.00	0.85	1.918	O					2.30
10.333	0.00	0.84	1.912	O					2.30
10.417	0.00	0.84	1.906	O					2.29
10.500	0.00	0.84	1.900	O					2.28
10.583	0.00	0.83	1.895	O					2.28
10.667	0.00	0.83	1.889	O					2.27
10.750	0.00	0.83	1.883	O					2.26
10.833	0.00	0.82	1.878	O					2.26
10.917	0.00	0.82	1.872	O					2.25
11.000	0.00	0.82	1.866	O					2.25
11.083	0.00	0.81	1.861	O					2.24
11.167	0.00	0.80	1.855	O					2.23
11.250	0.00	0.80	1.850	O					2.23
11.333	0.00	0.79	1.844	O					2.22
11.417	0.00	0.78	1.839	O					2.22
11.500	0.00	0.78	1.833	O					2.21
11.583	0.00	0.77	1.828	O					2.20
11.667	0.00	0.76	1.823	O					2.20
11.750	0.00	0.76	1.818	O					2.19
11.833	0.00	0.75	1.812	O					2.19
11.917	0.00	0.74	1.807	O					2.18
12.000	0.00	0.74	1.802	O					2.17
12.083	0.00	0.73	1.797	O					2.17
12.167	0.00	0.72	1.792	O					2.16
12.250	0.00	0.72	1.787	O					2.16
12.333	0.00	0.71	1.782	O					2.15
12.417	0.00	0.71	1.777	O					2.15
12.500	0.00	0.70	1.773	O					2.14
12.583	0.00	0.69	1.768	O					2.14
12.667	0.00	0.69	1.763	O					2.13
12.750	0.00	0.68	1.758	O					2.12
12.833	0.00	0.68	1.754	O					2.12
12.917	0.00	0.67	1.749	O					2.11
13.000	0.00	0.67	1.744	O					2.11
13.083	0.00	0.66	1.740	O					2.10
13.167	0.00	0.65	1.735	O					2.10
13.250	0.00	0.65	1.731	O					2.09
13.333	0.00	0.64	1.726	O					2.09
13.417	0.00	0.64	1.722	O					2.08
13.500	0.00	0.63	1.717	O					2.08
13.583	0.00	0.63	1.713	O					2.07
13.667	0.00	0.62	1.709	O					2.07
13.750	0.00	0.62	1.705	O					2.06
13.833	0.00	0.61	1.700	O					2.06
13.917	0.00	0.61	1.696	O					2.06
14.000	0.00	0.60	1.692	O					2.05
14.083	0.00	0.60	1.688	O					2.05
14.167	0.00	0.59	1.684	O					2.04
14.250	0.00	0.59	1.680	O					2.04
14.333	0.00	0.58	1.676	O					2.03
14.417	0.00	0.58	1.672	O					2.03
14.500	0.00	0.57	1.668	O					2.02
14.583	0.00	0.57	1.664	O					2.02
14.667	0.00	0.56	1.660	O					2.01
14.750	0.00	0.56	1.656	O					2.01
14.833	0.00	0.55	1.652	O					2.01
14.917	0.00	0.55	1.648	O					2.00
15.000	0.00	0.54	1.645	O					2.00
15.083	0.00	0.54	1.641	O					1.99
15.167	0.00	0.54	1.637	O					1.99
15.250	0.00	0.53	1.633	O					1.99
15.333	0.00	0.53	1.630	O					1.98
15.417	0.00	0.52	1.626	O					1.98
15.500	0.00	0.52	1.623	O					1.97
15.583	0.00	0.51	1.619	O					1.97
15.667	0.00	0.51	1.616	O					1.97
15.750	0.00	0.50	1.612	O					1.96
15.833	0.00	0.50	1.609	O					1.96
15.917	0.00	0.50	1.605	O					1.95
16.000	0.00	0.49	1.602	O					1.95
16.083	0.00	0.49	1.598	O					1.95
16.167	0.00	0.48	1.595	O					1.94
16.250	0.00	0.48	1.592	O					1.94
16.333	0.00	0.48	1.588	O					1.93
16.417	0.00	0.47	1.585	O					1.93
16.500	0.00	0.47	1.582	O					1.93
16.583	0.00	0.46	1.579	O					1.92
16.667	0.00	0.46	1.576	O					1.92
16.750	0.00	0.46	1.572	O					1.92
16.833	0.00	0.45	1.569	O					1.91
16.917	0.00	0.45	1.566	O					1.91
17.000	0.00	0.44	1.563	O					1.91
17.083	0.00	0.44	1.560	O					1.90
17.167	0.00	0.44	1.557	O					1.90
17.250	0.00	0.43	1.554	O					1.90
17.333	0.00	0.43	1.551	O					1.89
17.417	0.00	0.43	1.548	O					1.89
17.500	0.00	0.42	1.545	O					1.89
17.583	0.00	0.42	1.542	O					1.88
17.667	0.00	0.42	1.539	O					1.88
17.750	0.00	0.41	1.537	O					1.88
17.833	0.00	0.41	1.534	O					1.87
17.917	0.00	0.41	1.531	O					1.87
18.000	0.00	0.40	1.528	O					1.87
18.083	0.00	0.40	1.525	O					1.86

18.167	0.00	0.39	1.523	O					1.86
18.250	0.00	0.39	1.520	O					1.86
18.333	0.00	0.39	1.517	O					1.86
18.417	0.00	0.39	1.515	O					1.85
18.500	0.00	0.38	1.512	O					1.85
18.583	0.00	0.38	1.509	O					1.85
18.667	0.00	0.38	1.507	O					1.84
18.750	0.00	0.37	1.504	O					1.84
18.833	0.00	0.37	1.502	O					1.84
18.917	0.00	0.37	1.499	O					1.83
19.000	0.00	0.36	1.497	O					1.83
19.083	0.00	0.36	1.494	O					1.83
19.167	0.00	0.36	1.492	O					1.83
19.250	0.00	0.35	1.489	O					1.82
19.333	0.00	0.35	1.487	O					1.82
19.417	0.00	0.35	1.484	O					1.82
19.500	0.00	0.35	1.482	O					1.82
19.583	0.00	0.34	1.480	O					1.81
19.667	0.00	0.34	1.477	O					1.81
19.750	0.00	0.34	1.475	O					1.81
19.833	0.00	0.33	1.473	O					1.81
19.917	0.00	0.33	1.470	O					1.80
20.000	0.00	0.33	1.468	O					1.80
20.083	0.00	0.33	1.466	O					1.80
20.167	0.00	0.32	1.464	O					1.80
20.250	0.00	0.32	1.461	O					1.79
20.333	0.00	0.32	1.459	O					1.79
20.417	0.00	0.31	1.457	O					1.79
20.500	0.00	0.31	1.455	O					1.79
20.583	0.00	0.31	1.453	O					1.78
20.667	0.00	0.31	1.451	O					1.78
20.750	0.00	0.30	1.449	O					1.78
20.833	0.00	0.30	1.446	O					1.78
20.917	0.00	0.30	1.444	O					1.77
21.000	0.00	0.30	1.442	O					1.77
21.083	0.00	0.29	1.440	O					1.77
21.167	0.00	0.29	1.438	O					1.77
21.250	0.00	0.29	1.436	O					1.76
21.333	0.00	0.29	1.434	O					1.76
21.417	0.00	0.28	1.432	O					1.76
21.500	0.00	0.28	1.430	O					1.76
21.583	0.00	0.28	1.428	O					1.76
21.667	0.00	0.28	1.427	O					1.75
21.750	0.00	0.27	1.425	O					1.75
21.833	0.00	0.27	1.423	O					1.75
21.917	0.00	0.27	1.421	O					1.75
22.000	0.00	0.27	1.419	O					1.75
22.083	0.00	0.27	1.417	O					1.74
22.167	0.00	0.26	1.415	O					1.74
22.250	0.00	0.26	1.414	O					1.74
22.333	0.00	0.26	1.412	O					1.74
22.417	0.00	0.26	1.410	O					1.74
22.500	0.00	0.25	1.408	O					1.73
22.583	0.00	0.25	1.406	O					1.73
22.667	0.00	0.25	1.405	O					1.73
22.750	0.00	0.25	1.403	O					1.73
22.833	0.00	0.25	1.401	O					1.73
22.917	0.00	0.24	1.400	O					1.72
23.000	0.00	0.24	1.398	O					1.72
23.083	0.00	0.24	1.396	O					1.72
23.167	0.00	0.24	1.395	O					1.72
23.250	0.00	0.24	1.393	O					1.72
23.333	0.00	0.23	1.391	O					1.71
23.417	0.00	0.23	1.390	O					1.71
23.500	0.00	0.23	1.388	O					1.71
23.583	0.00	0.23	1.387	O					1.71
23.667	0.00	0.23	1.385	O					1.71
23.750	0.00	0.22	1.383	O					1.71
23.833	0.00	0.22	1.382	O					1.70
23.917	0.00	0.22	1.380	O					1.70
24.000	0.00	0.22	1.379	O					1.70
24.083	0.00	0.22	1.377	O					1.70
24.167	0.00	0.22	1.376	O					1.70
24.250	0.00	0.21	1.374	O					1.70
24.333	0.00	0.21	1.373	O					1.69
24.417	0.00	0.21	1.372	O					1.69
24.500	0.00	0.21	1.370	O					1.69
24.583	0.00	0.21	1.369	O					1.69
24.667	0.00	0.20	1.367	O					1.69
24.750	0.00	0.20	1.366	O					1.69
24.833	0.00	0.20	1.364	O					1.68
24.917	0.00	0.20	1.363	O					1.68
25.000	0.00	0.20	1.362	O					1.68
25.083	0.00	0.20	1.360	O					1.68
25.167	0.00	0.19	1.359	O					1.68
25.250	0.00	0.19	1.358	O					1.68
25.333	0.00	0.19	1.356	O					1.67
25.417	0.00	0.19	1.355	O					1.67
25.500	0.00	0.19	1.354	O					1.67
25.583	0.00	0.19	1.352	O					1.67
25.667	0.00	0.18	1.351	O					1.67
25.750	0.00	0.18	1.350	O					1.67
25.833	0.00	0.18	1.349	O					1.67
25.917	0.00	0.18	1.347	O					1.66
26.000	0.00	0.18	1.346	O					1.66
26.083	0.00	0.18	1.345	O					1.66
26.167	0.00	0.18	1.344	O					1.66

26.250	0.00	0.17	1.342	O					1.66
26.333	0.00	0.17	1.341	O					1.66
26.417	0.00	0.17	1.340	O					1.66
26.500	0.00	0.17	1.339	O					1.66
26.583	0.00	0.17	1.338	O					1.65
26.667	0.00	0.17	1.337	O					1.65
26.750	0.00	0.17	1.335	O					1.65
26.833	0.00	0.16	1.334	O					1.65
26.917	0.00	0.16	1.333	O					1.65
27.000	0.00	0.16	1.332	O					1.65
27.083	0.00	0.16	1.331	O					1.65
27.167	0.00	0.16	1.330	O					1.65
27.250	0.00	0.16	1.329	O					1.64
27.333	0.00	0.16	1.328	O					1.64
27.417	0.00	0.15	1.327	O					1.64
27.500	0.00	0.15	1.326	O					1.64
27.583	0.00	0.15	1.325	O					1.64
27.667	0.00	0.15	1.323	O					1.64
27.750	0.00	0.15	1.322	O					1.64
27.833	0.00	0.15	1.321	O					1.64
27.917	0.00	0.15	1.320	O					1.63
28.000	0.00	0.15	1.319	O					1.63
28.083	0.00	0.14	1.318	O					1.63
28.167	0.00	0.14	1.317	O					1.63
28.250	0.00	0.14	1.316	O					1.63
28.333	0.00	0.14	1.315	O					1.63
28.417	0.00	0.14	1.314	O					1.63
28.500	0.00	0.14	1.313	O					1.63
28.583	0.00	0.14	1.313	O					1.63
28.667	0.00	0.14	1.312	O					1.62
28.750	0.00	0.14	1.311	O					1.62
28.833	0.00	0.13	1.310	O					1.62
28.917	0.00	0.13	1.309	O					1.62
29.000	0.00	0.13	1.308	O					1.62
29.083	0.00	0.13	1.307	O					1.62
29.167	0.00	0.13	1.306	O					1.62
29.250	0.00	0.13	1.305	O					1.62
29.333	0.00	0.13	1.304	O					1.62
29.417	0.00	0.13	1.303	O					1.62
29.500	0.00	0.13	1.303	O					1.61
29.583	0.00	0.12	1.302	O					1.61
29.667	0.00	0.12	1.301	O					1.61
29.750	0.00	0.12	1.300	O					1.61
29.833	0.00	0.12	1.299	O					1.61
29.917	0.00	0.12	1.298	O					1.61
30.000	0.00	0.12	1.298	O					1.61
30.083	0.00	0.12	1.297	O					1.61
30.167	0.00	0.12	1.296	O					1.61
30.250	0.00	0.12	1.295	O					1.61
30.333	0.00	0.12	1.294	O					1.61
30.417	0.00	0.11	1.293	O					1.60
30.500	0.00	0.11	1.293	O					1.60
30.583	0.00	0.11	1.292	O					1.60
30.667	0.00	0.11	1.291	O					1.60
30.750	0.00	0.11	1.290	O					1.60
30.833	0.00	0.11	1.290	O					1.60
30.917	0.00	0.11	1.289	O					1.60
31.000	0.00	0.11	1.288	O					1.60
31.083	0.00	0.11	1.287	O					1.60
31.167	0.00	0.11	1.287	O					1.60
31.250	0.00	0.11	1.286	O					1.60
31.333	0.00	0.10	1.285	O					1.60
31.417	0.00	0.10	1.284	O					1.59
31.500	0.00	0.10	1.284	O					1.59
31.583	0.00	0.10	1.283	O					1.59
31.667	0.00	0.10	1.282	O					1.59
31.750	0.00	0.10	1.282	O					1.59
31.833	0.00	0.10	1.281	O					1.59
31.917	0.00	0.10	1.280	O					1.59
32.000	0.00	0.10	1.280	O					1.59
32.083	0.00	0.10	1.279	O					1.59
32.167	0.00	0.10	1.278	O					1.59
32.250	0.00	0.10	1.278	O					1.59
32.333	0.00	0.09	1.277	O					1.59
32.417	0.00	0.09	1.276	O					1.59
32.500	0.00	0.09	1.276	O					1.58
32.583	0.00	0.09	1.275	O					1.58
32.667	0.00	0.09	1.274	O					1.58
32.750	0.00	0.09	1.274	O					1.58
32.833	0.00	0.09	1.273	O					1.58
32.917	0.00	0.09	1.273	O					1.58
33.000	0.00	0.09	1.272	O					1.58
33.083	0.00	0.09	1.271	O					1.58
33.167	0.00	0.09	1.271	O					1.58
33.250	0.00	0.09	1.270	O					1.58
33.333	0.00	0.09	1.270	O					1.58
33.417	0.00	0.08	1.269	O					1.58
33.500	0.00	0.08	1.268	O					1.58
33.583	0.00	0.08	1.268	O					1.58
33.667	0.00	0.08	1.267	O					1.58
33.750	0.00	0.08	1.267	O					1.57
33.833	0.00	0.08	1.266	O					1.57
33.917	0.00	0.08	1.266	O					1.57
34.000	0.00	0.08	1.265	O					1.57
34.083	0.00	0.08	1.265	O					1.57
34.167	0.00	0.08	1.264	O					1.57
34.250	0.00	0.08	1.263	O					1.57

34.333	0.00	0.08	1.263	O					1.57
34.417	0.00	0.08	1.262	O					1.57
34.500	0.00	0.08	1.262	O					1.57
34.583	0.00	0.08	1.261	O					1.57
34.667	0.00	0.07	1.261	O					1.57
34.750	0.00	0.07	1.260	O					1.57
34.833	0.00	0.07	1.260	O					1.57
34.917	0.00	0.07	1.259	O					1.57
35.000	0.00	0.07	1.259	O					1.57
35.083	0.00	0.07	1.258	O					1.57
35.167	0.00	0.07	1.258	O					1.56
35.250	0.00	0.07	1.257	O					1.56
35.333	0.00	0.07	1.257	O					1.56
35.417	0.00	0.07	1.256	O					1.56
35.500	0.00	0.07	1.256	O					1.56
35.583	0.00	0.07	1.255	O					1.56
35.667	0.00	0.07	1.255	O					1.56
35.750	0.00	0.07	1.255	O					1.56
35.833	0.00	0.07	1.254	O					1.56
35.917	0.00	0.07	1.254	O					1.56
36.000	0.00	0.07	1.253	O					1.56
36.083	0.00	0.06	1.253	O					1.56
36.167	0.00	0.06	1.252	O					1.56
36.250	0.00	0.06	1.252	O					1.56
36.333	0.00	0.06	1.251	O					1.56
36.417	0.00	0.06	1.251	O					1.56
36.500	0.00	0.06	1.251	O					1.56
36.583	0.00	0.06	1.250	O					1.56
36.667	0.00	0.06	1.250	O					1.56
36.750	0.00	0.06	1.249	O					1.56
36.833	0.00	0.06	1.249	O					1.55
36.917	0.00	0.06	1.248	O					1.55
37.000	0.00	0.06	1.248	O					1.55
37.083	0.00	0.06	1.248	O					1.55
37.167	0.00	0.06	1.247	O					1.55
37.250	0.00	0.06	1.247	O					1.55
37.333	0.00	0.06	1.246	O					1.55
37.417	0.00	0.06	1.246	O					1.55
37.500	0.00	0.06	1.246	O					1.55
37.583	0.00	0.06	1.245	O					1.55
37.667	0.00	0.05	1.245	O					1.55
37.750	0.00	0.05	1.245	O					1.55
37.833	0.00	0.05	1.244	O					1.55
37.917	0.00	0.05	1.244	O					1.55
38.000	0.00	0.05	1.243	O					1.55
38.083	0.00	0.05	1.243	O					1.55
38.167	0.00	0.05	1.243	O					1.55
38.250	0.00	0.05	1.242	O					1.55
38.333	0.00	0.05	1.242	O					1.55
38.417	0.00	0.05	1.242	O					1.55
38.500	0.00	0.05	1.241	O					1.55
38.583	0.00	0.05	1.241	O					1.55
38.667	0.00	0.05	1.241	O					1.55
38.750	0.00	0.05	1.240	O					1.55
38.833	0.00	0.05	1.240	O					1.54
38.917	0.00	0.05	1.240	O					1.54
39.000	0.00	0.05	1.239	O					1.54
39.083	0.00	0.05	1.239	O					1.54
39.167	0.00	0.05	1.239	O					1.54
39.250	0.00	0.05	1.238	O					1.54
39.333	0.00	0.05	1.238	O					1.54
39.417	0.00	0.05	1.238	O					1.54
39.500	0.00	0.05	1.237	O					1.54
39.583	0.00	0.05	1.237	O					1.54
39.667	0.00	0.04	1.237	O					1.54
39.750	0.00	0.04	1.236	O					1.54
39.833	0.00	0.04	1.236	O					1.54
39.917	0.00	0.04	1.236	O					1.54
40.000	0.00	0.04	1.235	O					1.54
40.083	0.00	0.04	1.235	O					1.54
40.167	0.00	0.04	1.235	O					1.54
40.250	0.00	0.04	1.235	O					1.54
40.333	0.00	0.04	1.234	O					1.54
40.417	0.00	0.04	1.234	O					1.54
40.500	0.00	0.04	1.234	O					1.54
40.583	0.00	0.04	1.233	O					1.54
40.667	0.00	0.04	1.233	O					1.54
40.750	0.00	0.04	1.233	O					1.54
40.833	0.00	0.04	1.233	O					1.54
40.917	0.00	0.04	1.232	O					1.54
41.000	0.00	0.04	1.232	O					1.54
41.083	0.00	0.04	1.232	O					1.54
41.167	0.00	0.04	1.232	O					1.54
41.250	0.00	0.04	1.231	O					1.53
41.333	0.00	0.04	1.231	O					1.53
41.417	0.00	0.04	1.231	O					1.53
41.500	0.00	0.04	1.230	O					1.53
41.583	0.00	0.04	1.230	O					1.53
41.667	0.00	0.04	1.230	O					1.53
41.750	0.00	0.04	1.230	O					1.53
41.833	0.00	0.04	1.229	O					1.53
41.917	0.00	0.04	1.229	O					1.53
42.000	0.00	0.04	1.229	O					1.53
42.083	0.00	0.04	1.229	O					1.53
42.167	0.00	0.03	1.228	O					1.53
42.250	0.00	0.03	1.228	O					1.53
42.333	0.00	0.03	1.228	O					1.53

42.417	0.00	0.03	1.228	O					1.53
42.500	0.00	0.03	1.228	O					1.53
42.583	0.00	0.03	1.227	O					1.53
42.667	0.00	0.03	1.227	O					1.53
42.750	0.00	0.03	1.227	O					1.53
42.833	0.00	0.03	1.227	O					1.53
42.917	0.00	0.03	1.226	O					1.53
43.000	0.00	0.03	1.226	O					1.53
43.083	0.00	0.03	1.226	O					1.53
43.167	0.00	0.03	1.226	O					1.53
43.250	0.00	0.03	1.226	O					1.53
43.333	0.00	0.03	1.225	O					1.53
43.417	0.00	0.03	1.225	O					1.53
43.500	0.00	0.03	1.225	O					1.53
43.583	0.00	0.03	1.225	O					1.53
43.667	0.00	0.03	1.224	O					1.53
43.750	0.00	0.03	1.224	O					1.53
43.833	0.00	0.03	1.224	O					1.53
43.917	0.00	0.03	1.224	O					1.53
44.000	0.00	0.03	1.224	O					1.53
44.083	0.00	0.03	1.223	O					1.53
44.167	0.00	0.03	1.223	O					1.53
44.250	0.00	0.03	1.223	O					1.53
44.333	0.00	0.03	1.223	O					1.53
44.417	0.00	0.03	1.223	O					1.53
44.500	0.00	0.03	1.222	O					1.53
44.583	0.00	0.03	1.222	O					1.52
44.667	0.00	0.03	1.222	O					1.52
44.750	0.00	0.03	1.222	O					1.52
44.833	0.00	0.03	1.222	O					1.52
44.917	0.00	0.03	1.222	O					1.52
45.000	0.00	0.03	1.221	O					1.52
45.083	0.00	0.03	1.221	O					1.52
45.167	0.00	0.03	1.221	O					1.52
45.250	0.00	0.03	1.221	O					1.52
45.333	0.00	0.03	1.221	O					1.52
45.417	0.00	0.03	1.221	O					1.52
45.500	0.00	0.02	1.220	O					1.52
45.583	0.00	0.02	1.220	O					1.52
45.667	0.00	0.02	1.220	O					1.52
45.750	0.00	0.02	1.220	O					1.52
45.833	0.00	0.02	1.220	O					1.52
45.917	0.00	0.02	1.219	O					1.52
46.000	0.00	0.02	1.219	O					1.52
46.083	0.00	0.02	1.219	O					1.52
46.167	0.00	0.02	1.219	O					1.52
46.250	0.00	0.02	1.219	O					1.52
46.333	0.00	0.02	1.219	O					1.52
46.417	0.00	0.02	1.219	O					1.52
46.500	0.00	0.02	1.218	O					1.52
46.583	0.00	0.02	1.218	O					1.52
46.667	0.00	0.02	1.218	O					1.52
46.750	0.00	0.02	1.218	O					1.52
46.833	0.00	0.02	1.218	O					1.52
46.917	0.00	0.02	1.218	O					1.52
47.000	0.00	0.02	1.217	O					1.52
47.083	0.00	0.02	1.217	O					1.52
47.167	0.00	0.02	1.217	O					1.52
47.250	0.00	0.02	1.217	O					1.52
47.333	0.00	0.02	1.217	O					1.52
47.417	0.00	0.02	1.217	O					1.52
47.500	0.00	0.02	1.217	O					1.52
47.583	0.00	0.02	1.216	O					1.52
47.667	0.00	0.02	1.216	O					1.52
47.750	0.00	0.02	1.216	O					1.52
47.833	0.00	0.02	1.216	O					1.52
47.917	0.00	0.02	1.216	O					1.52
48.000	0.00	0.02	1.216	O					1.52
48.083	0.00	0.02	1.216	O					1.52
48.167	0.00	0.02	1.216	O					1.52
48.250	0.00	0.02	1.215	O					1.52
48.333	0.00	0.02	1.215	O					1.52
48.417	0.00	0.02	1.215	O					1.52
48.500	0.00	0.02	1.215	O					1.52
48.583	0.00	0.02	1.215	O					1.52
48.667	0.00	0.02	1.215	O					1.52
48.750	0.00	0.02	1.215	O					1.52
48.833	0.00	0.02	1.215	O					1.52
48.917	0.00	0.02	1.214	O					1.52
49.000	0.00	0.02	1.214	O					1.52
49.083	0.00	0.02	1.214	O					1.52
49.167	0.00	0.02	1.214	O					1.52
49.250	0.00	0.02	1.214	O					1.52
49.333	0.00	0.02	1.214	O					1.52
49.417	0.00	0.02	1.214	O					1.52
49.500	0.00	0.02	1.214	O					1.52
49.583	0.00	0.02	1.213	O					1.52
49.667	0.00	0.02	1.213	O					1.51
49.750	0.00	0.02	1.213	O					1.51
49.833	0.00	0.02	1.213	O					1.51
49.917	0.00	0.02	1.213	O					1.51
50.000	0.00	0.02	1.213	O					1.51
50.083	0.00	0.02	1.213	O					1.51
50.167	0.00	0.02	1.213	O					1.51
50.250	0.00	0.02	1.213	O					1.51
50.333	0.00	0.02	1.212	O					1.51
50.417	0.00	0.02	1.212	O					1.51

50.500	0.00	0.02	1.212	O					1.51
50.583	0.00	0.01	1.212	O					1.51
50.667	0.00	0.01	1.212	O					1.51
50.750	0.00	0.01	1.212	O					1.51
50.833	0.00	0.01	1.212	O					1.51
50.917	0.00	0.01	1.212	O					1.51
51.000	0.00	0.01	1.212	O					1.51
51.083	0.00	0.01	1.212	O					1.51
51.167	0.00	0.01	1.211	O					1.51
51.250	0.00	0.01	1.211	O					1.51
51.333	0.00	0.01	1.211	O					1.51
51.417	0.00	0.01	1.211	O					1.51
51.500	0.00	0.01	1.211	O					1.51
51.583	0.00	0.01	1.211	O					1.51
51.667	0.00	0.01	1.211	O					1.51
51.750	0.00	0.01	1.211	O					1.51
51.833	0.00	0.01	1.211	O					1.51
51.917	0.00	0.01	1.211	O					1.51
52.000	0.00	0.01	1.211	O					1.51
52.083	0.00	0.01	1.210	O					1.51
52.167	0.00	0.01	1.210	O					1.51
52.250	0.00	0.01	1.210	O					1.51
52.333	0.00	0.01	1.210	O					1.51
52.417	0.00	0.01	1.210	O					1.51
52.500	0.00	0.01	1.210	O					1.51
52.583	0.00	0.01	1.210	O					1.51
52.667	0.00	0.01	1.210	O					1.51
52.750	0.00	0.01	1.210	O					1.51
52.833	0.00	0.01	1.210	O					1.51
52.917	0.00	0.01	1.210	O					1.51
53.000	0.00	0.01	1.210	O					1.51
53.083	0.00	0.01	1.209	O					1.51
53.167	0.00	0.01	1.209	O					1.51
53.250	0.00	0.01	1.209	O					1.51
53.333	0.00	0.01	1.209	O					1.51
53.417	0.00	0.01	1.209	O					1.51
53.500	0.00	0.01	1.209	O					1.51
53.583	0.00	0.01	1.209	O					1.51
53.667	0.00	0.01	1.209	O					1.51
53.750	0.00	0.01	1.209	O					1.51
53.833	0.00	0.01	1.209	O					1.51
53.917	0.00	0.01	1.209	O					1.51
54.000	0.00	0.01	1.209	O					1.51
54.083	0.00	0.01	1.209	O					1.51
54.167	0.00	0.01	1.208	O					1.51
54.250	0.00	0.01	1.208	O					1.51
54.333	0.00	0.01	1.208	O					1.51
54.417	0.00	0.01	1.208	O					1.51
54.500	0.00	0.01	1.208	O					1.51
54.583	0.00	0.01	1.208	O					1.51
54.667	0.00	0.01	1.208	O					1.51
54.750	0.00	0.01	1.208	O					1.51
54.833	0.00	0.01	1.208	O					1.51
54.917	0.00	0.01	1.208	O					1.51
55.000	0.00	0.01	1.208	O					1.51
55.083	0.00	0.01	1.208	O					1.51
55.167	0.00	0.01	1.208	O					1.51
55.250	0.00	0.01	1.208	O					1.51
55.333	0.00	0.01	1.208	O					1.51
55.417	0.00	0.01	1.207	O					1.51
55.500	0.00	0.01	1.207	O					1.51
55.583	0.00	0.01	1.207	O					1.51
55.667	0.00	0.01	1.207	O					1.51
55.750	0.00	0.01	1.207	O					1.51
55.833	0.00	0.01	1.207	O					1.51
55.917	0.00	0.01	1.207	O					1.51
56.000	0.00	0.01	1.207	O					1.51
56.083	0.00	0.01	1.207	O					1.51
56.167	0.00	0.01	1.207	O					1.51
56.250	0.00	0.01	1.207	O					1.51
56.333	0.00	0.01	1.207	O					1.51
56.417	0.00	0.01	1.207	O					1.51
56.500	0.00	0.01	1.207	O					1.51
56.583	0.00	0.01	1.207	O					1.51
56.667	0.00	0.01	1.207	O					1.51
56.750	0.00	0.01	1.207	O					1.51
56.833	0.00	0.01	1.206	O					1.51
56.917	0.00	0.01	1.206	O					1.51
57.000	0.00	0.01	1.206	O					1.51
57.083	0.00	0.01	1.206	O					1.51
57.167	0.00	0.01	1.206	O					1.51
57.250	0.00	0.01	1.206	O					1.51
57.333	0.00	0.01	1.206	O					1.51
57.417	0.00	0.01	1.206	O					1.51
57.500	0.00	0.01	1.206	O					1.51
57.583	0.00	0.01	1.206	O					1.51
57.667	0.00	0.01	1.206	O					1.51
57.750	0.00	0.01	1.206	O					1.51
57.833	0.00	0.01	1.206	O					1.51
57.917	0.00	0.01	1.206	O					1.51
58.000	0.00	0.01	1.206	O					1.51
58.083	0.00	0.01	1.206	O					1.51
58.167	0.00	0.01	1.206	O					1.51
58.250	0.00	0.01	1.206	O					1.51
58.333	0.00	0.01	1.206	O					1.51
58.417	0.00	0.01	1.206	O					1.51
58.500	0.00	0.01	1.205	O					1.51

58.583	0.00	0.01	1.205	O					1.51
58.667	0.00	0.01	1.205	O					1.51
58.750	0.00	0.01	1.205	O					1.51
58.833	0.00	0.01	1.205	O					1.51
58.917	0.00	0.01	1.205	O					1.51
59.000	0.00	0.01	1.205	O					1.51
59.083	0.00	0.01	1.205	O					1.51
59.167	0.00	0.01	1.205	O					1.51
59.250	0.00	0.01	1.205	O					1.51
59.333	0.00	0.01	1.205	O					1.51
59.417	0.00	0.01	1.205	O					1.51
59.500	0.00	0.01	1.205	O					1.51
59.583	0.00	0.01	1.205	O					1.51
59.667	0.00	0.01	1.205	O					1.51
59.750	0.00	0.01	1.205	O					1.51
59.833	0.00	0.01	1.205	O					1.51
59.917	0.00	0.01	1.205	O					1.51
60.000	0.00	0.01	1.205	O					1.51
60.083	0.00	0.01	1.205	O					1.51
60.167	0.00	0.01	1.205	O					1.51
60.250	0.00	0.01	1.205	O					1.51
60.333	0.00	0.01	1.205	O					1.51
60.417	0.00	0.01	1.204	O					1.51
60.500	0.00	0.01	1.204	O					1.50
60.583	0.00	0.01	1.204	O					1.50
60.667	0.00	0.01	1.204	O					1.50
60.750	0.00	0.01	1.204	O					1.50
60.833	0.00	0.01	1.204	O					1.50
60.917	0.00	0.01	1.204	O					1.50
61.000	0.00	0.01	1.204	O					1.50
61.083	0.00	0.01	1.204	O					1.50
61.167	0.00	0.01	1.204	O					1.50
61.250	0.00	0.01	1.204	O					1.50
61.333	0.00	0.01	1.204	O					1.50
61.417	0.00	0.00	1.204	O					1.50
61.500	0.00	0.00	1.204	O					1.50
61.583	0.00	0.00	1.204	O					1.50
61.667	0.00	0.00	1.204	O					1.50
61.750	0.00	0.00	1.204	O					1.50
61.833	0.00	0.00	1.204	O					1.50
61.917	0.00	0.00	1.204	O					1.50
62.000	0.00	0.00	1.204	O					1.50
62.083	0.00	0.00	1.204	O					1.50
62.167	0.00	0.00	1.204	O					1.50
62.250	0.00	0.00	1.204	O					1.50
62.333	0.00	0.00	1.204	O					1.50
62.417	0.00	0.00	1.204	O					1.50
62.500	0.00	0.00	1.204	O					1.50
62.583	0.00	0.00	1.204	O					1.50
62.667	0.00	0.00	1.204	O					1.50
62.750	0.00	0.00	1.204	O					1.50
62.833	0.00	0.00	1.204	O					1.50
62.917	0.00	0.00	1.203	O					1.50
63.000	0.00	0.00	1.203	O					1.50
63.083	0.00	0.00	1.203	O					1.50
63.167	0.00	0.00	1.203	O					1.50
63.250	0.00	0.00	1.203	O					1.50
63.333	0.00	0.00	1.203	O					1.50
63.417	0.00	0.00	1.203	O					1.50
63.500	0.00	0.00	1.203	O					1.50
63.583	0.00	0.00	1.203	O					1.50
63.667	0.00	0.00	1.203	O					1.50
63.750	0.00	0.00	1.203	O					1.50
63.833	0.00	0.00	1.203	O					1.50
63.917	0.00	0.00	1.203	O					1.50
64.000	0.00	0.00	1.203	O					1.50
64.083	0.00	0.00	1.203	O					1.50
64.167	0.00	0.00	1.203	O					1.50
64.250	0.00	0.00	1.203	O					1.50
64.333	0.00	0.00	1.203	O					1.50
64.417	0.00	0.00	1.203	O					1.50
64.500	0.00	0.00	1.203	O					1.50
64.583	0.00	0.00	1.203	O					1.50
64.667	0.00	0.00	1.203	O					1.50
64.750	0.00	0.00	1.203	O					1.50
64.833	0.00	0.00	1.203	O					1.50
64.917	0.00	0.00	1.203	O					1.50
65.000	0.00	0.00	1.203	O					1.50
65.083	0.00	0.00	1.203	O					1.50
65.167	0.00	0.00	1.203	O					1.50
65.250	0.00	0.00	1.203	O					1.50
65.333	0.00	0.00	1.203	O					1.50
65.417	0.00	0.00	1.203	O					1.50
65.500	0.00	0.00	1.203	O					1.50
65.583	0.00	0.00	1.203	O					1.50
65.667	0.00	0.00	1.203	O					1.50
65.750	0.00	0.00	1.203	O					1.50
65.833	0.00	0.00	1.203	O					1.50
65.917	0.00	0.00	1.203	O					1.50
66.000	0.00	0.00	1.203	O					1.50
66.083	0.00	0.00	1.203	O					1.50
66.167	0.00	0.00	1.203	O					1.50
66.250	0.00	0.00	1.202	O					1.50
66.333	0.00	0.00	1.202	O					1.50
66.417	0.00	0.00	1.202	O					1.50
66.500	0.00	0.00	1.202	O					1.50
66.583	0.00	0.00	1.202	O					1.50

66.667	0.00	0.00	1.202	O					1.50
66.750	0.00	0.00	1.202	O					1.50
66.833	0.00	0.00	1.202	O					1.50
66.917	0.00	0.00	1.202	O					1.50
67.000	0.00	0.00	1.202	O					1.50
67.083	0.00	0.00	1.202	O					1.50
67.167	0.00	0.00	1.202	O					1.50
67.250	0.00	0.00	1.202	O					1.50
67.333	0.00	0.00	1.202	O					1.50
67.417	0.00	0.00	1.202	O					1.50
67.500	0.00	0.00	1.202	O					1.50
67.583	0.00	0.00	1.202	O					1.50
67.667	0.00	0.00	1.202	O					1.50
67.750	0.00	0.00	1.202	O					1.50
67.833	0.00	0.00	1.202	O					1.50
67.917	0.00	0.00	1.202	O					1.50
68.000	0.00	0.00	1.202	O					1.50
68.083	0.00	0.00	1.202	O					1.50
68.167	0.00	0.00	1.202	O					1.50
68.250	0.00	0.00	1.202	O					1.50
68.333	0.00	0.00	1.202	O					1.50
68.417	0.00	0.00	1.202	O					1.50
68.500	0.00	0.00	1.202	O					1.50
68.583	0.00	0.00	1.202	O					1.50
68.667	0.00	0.00	1.202	O					1.50
68.750	0.00	0.00	1.202	O					1.50
68.833	0.00	0.00	1.202	O					1.50
68.917	0.00	0.00	1.202	O					1.50
69.000	0.00	0.00	1.202	O					1.50
69.083	0.00	0.00	1.202	O					1.50
69.167	0.00	0.00	1.202	O					1.50
69.250	0.00	0.00	1.202	O					1.50
69.333	0.00	0.00	1.202	O					1.50
69.417	0.00	0.00	1.202	O					1.50
69.500	0.00	0.00	1.202	O					1.50
69.583	0.00	0.00	1.202	O					1.50
69.667	0.00	0.00	1.202	O					1.50
69.750	0.00	0.00	1.202	O					1.50
69.833	0.00	0.00	1.202	O					1.50
69.917	0.00	0.00	1.202	O					1.50
70.000	0.00	0.00	1.202	O					1.50
70.083	0.00	0.00	1.202	O					1.50
70.167	0.00	0.00	1.202	O					1.50
70.250	0.00	0.00	1.202	O					1.50
70.333	0.00	0.00	1.202	O					1.50
70.417	0.00	0.00	1.202	O					1.50
70.500	0.00	0.00	1.202	O					1.50
70.583	0.00	0.00	1.202	O					1.50
70.667	0.00	0.00	1.202	O					1.50
70.750	0.00	0.00	1.202	O					1.50
70.833	0.00	0.00	1.202	O					1.50
70.917	0.00	0.00	1.202	O					1.50
71.000	0.00	0.00	1.202	O					1.50
71.083	0.00	0.00	1.202	O					1.50
71.167	0.00	0.00	1.202	O					1.50
71.250	0.00	0.00	1.202	O					1.50
71.333	0.00	0.00	1.201	O					1.50
71.417	0.00	0.00	1.201	O					1.50
71.500	0.00	0.00	1.201	O					1.50
71.583	0.00	0.00	1.201	O					1.50
71.667	0.00	0.00	1.201	O					1.50
71.750	0.00	0.00	1.201	O					1.50
71.833	0.00	0.00	1.201	O					1.50
71.917	0.00	0.00	1.201	O					1.50
72.000	0.00	0.00	1.201	O					1.50
72.083	0.00	0.00	1.201	O					1.50
72.167	0.00	0.00	1.201	O					1.50
72.250	0.00	0.00	1.201	O					1.50
72.333	0.00	0.00	1.201	O					1.50
72.417	0.00	0.00	1.201	O					1.50
72.500	0.00	0.00	1.201	O					1.50
72.583	0.00	0.00	1.201	O					1.50
72.667	0.00	0.00	1.201	O					1.50
72.750	0.00	0.00	1.201	O					1.50
72.833	0.00	0.00	1.201	O					1.50
72.917	0.00	0.00	1.201	O					1.50
73.000	0.00	0.00	1.201	O					1.50
73.083	0.00	0.00	1.201	O					1.50
73.167	0.00	0.00	1.201	O					1.50
73.250	0.00	0.00	1.201	O					1.50
73.333	0.00	0.00	1.201	O					1.50
73.417	0.00	0.00	1.201	O					1.50
73.500	0.00	0.00	1.201	O					1.50
73.583	0.00	0.00	1.201	O					1.50
73.667	0.00	0.00	1.201	O					1.50
73.750	0.00	0.00	1.201	O					1.50
73.833	0.00	0.00	1.201	O					1.50
73.917	0.00	0.00	1.201	O					1.50
74.000	0.00	0.00	1.201	O					1.50
74.083	0.00	0.00	1.201	O					1.50
74.167	0.00	0.00	1.201	O					1.50
74.250	0.00	0.00	1.201	O					1.50
74.333	0.00	0.00	1.201	O					1.50
74.417	0.00	0.00	1.201	O					1.50
74.500	0.00	0.00	1.201	O					1.50
74.583	0.00	0.00	1.201	O					1.50
74.667	0.00	0.00	1.201	O					1.50

74.750	0.00	0.00	1.201	O				1.50
74.833	0.00	0.00	1.201	O				1.50
74.917	0.00	0.00	1.201	O				1.50
75.000	0.00	0.00	1.201	O				1.50
75.083	0.00	0.00	1.201	O				1.50
75.167	0.00	0.00	1.201	O				1.50
75.250	0.00	0.00	1.201	O				1.50
75.333	0.00	0.00	1.201	O				1.50
75.417	0.00	0.00	1.201	O				1.50
75.500	0.00	0.00	1.201	O				1.50
75.583	0.00	0.00	1.201	O				1.50
75.667	0.00	0.00	1.201	O				1.50
75.750	0.00	0.00	1.201	O				1.50
75.833	0.00	0.00	1.201	O				1.50
75.917	0.00	0.00	1.201	O				1.50
76.000	0.00	0.00	1.201	O				1.50
76.083	0.00	0.00	1.201	O				1.50
76.167	0.00	0.00	1.201	O				1.50
76.250	0.00	0.00	1.201	O				1.50
76.333	0.00	0.00	1.201	O				1.50
76.417	0.00	0.00	1.201	O				1.50
76.500	0.00	0.00	1.201	O				1.50
76.583	0.00	0.00	1.201	O				1.50
76.667	0.00	0.00	1.201	O				1.50
76.750	0.00	0.00	1.201	O				1.50
76.833	0.00	0.00	1.201	O				1.50
76.917	0.00	0.00	1.201	O				1.50
77.000	0.00	0.00	1.201	O				1.50
77.083	0.00	0.00	1.201	O				1.50
77.167	0.00	0.00	1.201	O				1.50
77.250	0.00	0.00	1.201	O				1.50
77.333	0.00	0.00	1.201	O				1.50

Remaining water in basin = 1.20 (Ac.Ft)

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

Number of intervals = 928
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 15.868 (CFS)
Total volume = 2.862 (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

****

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2014
Study date: 06/02/23

JURUPA VALLEY COMMERCE PARK
PROPOSED CONDITION - BASIN B - NODES 200-235
MITIGATION ANALYSIS - 100-YEAR
24-HOUR - 100-YEAR

Program License Serial Number 6400

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

From study/file name: 3384PBBC24100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 294
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 15.877 (CFS)
Total volume = 8.640 (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 0.000 to Point/Station 0.000
**** RETARDING BASIN ROUTING ****
_____

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 294
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
0.250	0.190	0.000	0.190	0.190
1.250	0.990	0.000	0.990	0.990
1.500	1.200	0.000	1.200	1.200
2.250	1.870	0.820	1.867	1.873
2.500	2.100	0.950	2.097	2.103
3.250	2.830	14.350	2.781	2.879
4.250	3.870	21.580	3.796	3.944
5.250	5.020	26.920	4.927	5.113
5.850	5.750	29.660	5.648	5.852

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 4.0 7.94 11.91 15.88	Depth (Ft.)
0.083	0.21	0.00	0.001	O	0.00
0.167	0.59	0.00	0.003	OI	0.00
0.250	0.69	0.00	0.008	OI	0.01
0.333	0.84	0.00	0.013	OI	0.02
0.417	1.06	0.00	0.020	O I	0.03
0.500	1.12	0.00	0.027	O I	0.04
0.583	1.15	0.00	0.035	O I	0.05
0.667	1.17	0.00	0.043	O I	0.06
0.750	1.17	0.00	0.051	O I	0.07
0.833	1.28	0.00	0.060	O I	0.08
0.917	1.47	0.00	0.069	O I	0.09
1.000	1.52	0.00	0.079	O I	0.10
1.083	1.44	0.00	0.089	O I	0.12
1.167	1.26	0.00	0.099	O I	0.13
1.250	1.22	0.00	0.107	O I	0.14
1.333	1.20	0.00	0.116	O I	0.15
1.417	1.19	0.00	0.124	O I	0.16
1.500	1.18	0.00	0.132	O I	0.17
1.583	1.18	0.00	0.140	O I	0.18
1.667	1.18	0.00	0.148	O I	0.20
1.750	1.18	0.00	0.156	O I	0.21
1.833	1.28	0.00	0.165	O I	0.22
1.917	1.47	0.00	0.174	O I	0.23

2.000	1.52	0.00	0.185	O	I						0.24
2.083	1.54	0.00	0.195	O	I						0.26
2.167	1.56	0.00	0.206	O	I						0.27
2.250	1.56	0.00	0.217	O	I						0.28
2.333	1.57	0.00	0.227	O	I						0.30
2.417	1.57	0.00	0.238	O	I						0.31
2.500	1.57	0.00	0.249	O	I						0.32
2.583	1.67	0.00	0.260	O	I						0.34
2.667	1.86	0.00	0.272	O	I						0.35
2.750	1.91	0.00	0.285	O	I						0.37
2.833	1.94	0.00	0.299	O	I						0.39
2.917	1.95	0.00	0.312	O	I						0.40
3.000	1.96	0.00	0.325	O	I						0.42
3.083	1.96	0.00	0.339	O	I						0.44
3.167	1.96	0.00	0.352	O	I						0.45
3.250	1.96	0.00	0.366	O	I						0.47
3.333	1.96	0.00	0.379	O	I						0.49
3.417	1.96	0.00	0.393	O	I						0.50
3.500	1.96	0.00	0.406	O	I						0.52
3.583	1.96	0.00	0.420	O	I						0.54
3.667	1.96	0.00	0.433	O	I						0.55
3.750	1.96	0.00	0.447	O	I						0.57
3.833	2.07	0.00	0.461	O	I						0.59
3.917	2.26	0.00	0.476	O	I						0.61
4.000	2.31	0.00	0.491	O	I						0.63
4.083	2.33	0.00	0.507	O	I						0.65
4.167	2.34	0.00	0.523	O	I						0.67
4.250	2.35	0.00	0.540	O	I						0.69
4.333	2.46	0.00	0.556	O	I						0.71
4.417	2.65	0.00	0.574	O	I						0.73
4.500	2.70	0.00	0.592	O	I						0.75
4.583	2.72	0.00	0.611	O	I						0.78
4.667	2.73	0.00	0.630	O	I						0.80
4.750	2.74	0.00	0.648	O	I						0.82
4.833	2.85	0.00	0.668	O	I						0.85
4.917	3.04	0.00	0.688	O	I						0.87
5.000	3.09	0.00	0.709	O	I						0.90
5.083	2.90	0.00	0.730	O	I						0.92
5.167	2.54	0.00	0.748	O	I						0.95
5.250	2.44	0.00	0.766	O	I						0.97
5.333	2.51	0.00	0.783	O	I						0.99
5.417	2.67	0.00	0.800	O	I						1.01
5.500	2.71	0.00	0.819	O	I						1.04
5.583	2.83	0.00	0.838	O	I						1.06
5.667	3.03	0.00	0.858	O	I						1.09
5.750	3.09	0.00	0.879	O	I						1.11
5.833	3.11	0.00	0.901	O	I						1.14
5.917	3.13	0.00	0.922	O	I						1.17
6.000	3.13	0.00	0.944	O	I						1.19
6.083	3.24	0.00	0.966	O	I						1.22
6.167	3.43	0.00	0.989	O	I						1.25
6.250	3.48	0.00	1.012	O	I						1.28
6.333	3.51	0.00	1.036	O	I						1.31
6.417	3.52	0.00	1.061	O	I						1.33
6.500	3.52	0.00	1.085	O	I						1.36
6.583	3.63	0.00	1.110	O	I						1.39
6.667	3.82	0.00	1.135	O	I						1.42
6.750	3.87	0.00	1.162	O	I						1.45
6.833	3.90	0.00	1.189	O	I						1.49
6.917	3.91	0.02	1.215	O	I						1.52
7.000	3.92	0.05	1.242	O	I						1.55
7.083	3.92	0.08	1.269	O	I						1.58
7.167	3.92	0.12	1.295	O	I						1.61
7.250	3.92	0.15	1.321	O	I						1.64
7.333	4.03	0.18	1.347	O	I						1.66
7.417	4.22	0.21	1.374	O	I						1.70
7.500	4.27	0.25	1.402	O	I						1.73
7.583	4.39	0.28	1.430	O	I						1.76
7.667	4.60	0.32	1.459	O	I						1.79
7.750	4.65	0.35	1.488	O	I						1.82
7.833	4.79	0.39	1.518	O	I						1.86
7.917	4.99	0.43	1.549	O	I						1.89
8.000	5.05	0.47	1.581	O	I						1.93
8.083	5.28	0.51	1.613	O	I						1.96
8.167	5.68	0.55	1.647	O	I						2.00
8.250	5.78	0.59	1.683	O	I						2.04
8.333	5.83	0.63	1.718	O	I						2.08
8.417	5.86	0.68	1.754	O	I						2.12
8.500	5.87	0.72	1.790	O	I						2.16
8.583	5.99	0.77	1.825	O	I						2.20
8.667	6.18	0.81	1.862	O	I						2.24
8.750	6.23	0.84	1.899	O	I						2.28
8.833	6.36	0.86	1.936	O	I						2.32
8.917	6.56	0.88	1.975	O	I						2.36
9.000	6.62	0.90	2.014	O	I						2.41
9.083	6.85	0.92	2.054	O	I						2.45
9.167	7.25	0.95	2.096	O	I						2.50
9.250	7.35	1.64	2.138	O	I						2.54
9.333	7.53	2.33	2.175	O	I						2.58
9.417	7.78	2.96	2.210	O	I						2.61
9.500	7.86	3.54	2.241	O	I						2.64
9.583	8.05	4.07	2.270	O	I						2.67
9.667	8.33	4.56	2.296	O	I						2.70
9.750	8.42	5.01	2.321	O	I						2.73
9.833	8.61	5.43	2.344	O	I						2.75
9.917	8.90	5.82	2.365	O	I						2.77
10.000	8.99	6.19	2.386	O	I						2.79

10.083	8.18	6.48	2.401				2.81
10.167	6.65	6.59	2.407				2.82
10.250	6.25	6.57	2.406				2.81
10.333	6.08	6.52	2.404				2.81
10.417	5.97	6.47	2.400				2.81
10.500	5.92	6.40	2.397				2.81
10.583	6.47	6.38	2.396				2.80
10.667	7.55	6.45	2.400				2.81
10.750	7.85	6.60	2.408				2.82
10.833	7.99	6.76	2.416				2.83
10.917	8.07	6.91	2.425				2.83
11.000	8.12	7.05	2.432				2.84
11.083	8.01	7.17	2.439				2.85
11.167	7.77	7.26	2.444				2.85
11.250	7.71	7.31	2.447				2.86
11.333	7.69	7.36	2.449				2.86
11.417	7.69	7.40	2.451				2.86
11.500	7.69	7.43	2.453				2.86
11.583	7.42	7.45	2.454				2.86
11.667	6.92	7.42	2.452				2.86
11.750	6.79	7.35	2.449				2.86
11.833	6.88	7.29	2.445				2.85
11.917	7.11	7.25	2.443				2.85
12.000	7.18	7.24	2.443				2.85
12.083	8.20	7.29	2.446				2.86
12.167	10.02	7.51	2.457				2.87
12.250	10.52	7.84	2.475				2.89
12.333	10.90	8.18	2.494				2.90
12.417	11.28	8.53	2.513				2.92
12.500	11.43	8.86	2.531				2.94
12.583	11.80	9.19	2.549				2.96
12.667	12.34	9.53	2.568				2.98
12.750	12.50	9.87	2.586				3.00
12.833	12.72	10.20	2.604				3.02
12.917	13.02	10.52	2.621				3.04
13.000	13.12	10.82	2.638				3.05
13.083	13.88	11.14	2.655				3.07
13.167	15.19	11.54	2.677				3.09
13.250	15.55	12.00	2.702				3.12
13.333	15.72	12.43	2.725				3.14
13.417	15.82	12.83	2.747				3.16
13.500	15.88	13.19	2.767				3.18
13.583	14.36	13.42	2.779				3.20
13.667	11.54	13.36	2.776				3.19
13.750	10.80	13.10	2.762				3.18
13.833	10.48	12.81	2.746				3.16
13.917	10.30	12.52	2.730				3.15
14.000	10.21	12.25	2.716				3.13
14.083	10.72	12.04	2.704				3.12
14.167	11.76	11.94	2.699				3.12
14.250	12.04	11.94	2.699				3.11
14.333	12.03	11.95	2.699				3.12
14.417	11.85	11.95	2.699				3.12
14.500	11.83	11.94	2.698				3.11
14.583	11.84	11.92	2.698				3.11
14.667	11.83	11.91	2.697				3.11
14.750	11.83	11.90	2.697				3.11
14.833	11.69	11.89	2.696				3.11
14.917	11.44	11.85	2.694				3.11
15.000	11.39	11.80	2.691				3.11
15.083	11.22	11.74	2.688				3.10
15.167	10.96	11.66	2.684				3.10
15.250	10.89	11.57	2.679				3.09
15.333	10.72	11.48	2.674				3.09
15.417	10.46	11.38	2.668				3.08
15.500	10.39	11.26	2.662				3.08
15.583	9.80	11.12	2.654				3.07
15.667	8.76	10.90	2.642				3.06
15.750	8.49	10.63	2.628				3.04
15.833	8.37	10.37	2.613				3.03
15.917	8.31	10.13	2.600				3.01
16.000	8.28	9.91	2.588				3.00
16.083	6.47	9.61	2.572				2.98
16.167	3.23	9.04	2.541				2.95
16.250	2.37	8.30	2.500				2.91
16.333	1.98	7.57	2.461				2.87
16.417	1.76	6.89	2.424				2.83
16.500	1.64	6.28	2.390				2.80
16.583	1.46	5.72	2.360				2.77
16.667	1.27	5.20	2.331				2.74
16.750	1.22	4.73	2.306				2.71
16.833	1.20	4.31	2.283				2.69
16.917	1.19	3.94	2.263				2.67
17.000	1.18	3.61	2.245				2.65
17.083	1.39	3.34	2.230				2.63
17.167	1.77	3.13	2.219				2.62
17.250	1.87	2.97	2.210				2.61
17.333	1.91	2.84	2.203				2.61
17.417	1.94	2.73	2.197				2.60
17.500	1.95	2.64	2.192				2.59
17.583	1.96	2.56	2.188				2.59
17.667	1.96	2.49	2.184				2.59
17.750	1.96	2.42	2.180				2.58
17.833	1.86	2.36	2.177				2.58
17.917	1.67	2.29	2.173				2.58
18.000	1.62	2.21	2.169				2.57
18.083	1.59	2.14	2.165				2.57

18.167	1.58	2.08	2.161	IO				2.56
18.250	1.57	2.02	2.158	IO				2.56
18.333	1.57	1.96	2.155	O				2.56
18.417	1.57	1.92	2.153	O				2.55
18.500	1.57	1.88	2.150	O				2.55
18.583	1.46	1.83	2.148	IO				2.55
18.667	1.27	1.78	2.145	IO				2.55
18.750	1.22	1.71	2.142	IO				2.54
18.833	1.10	1.65	2.138	IO				2.54
18.917	0.89	1.57	2.134	I O				2.53
19.000	0.84	1.49	2.129	IO				2.53
19.083	0.91	1.41	2.125	IO				2.53
19.167	1.09	1.36	2.123	O				2.52
19.250	1.13	1.33	2.121	O				2.52
19.333	1.26	1.32	2.120	O				2.52
19.417	1.46	1.32	2.120	O				2.52
19.500	1.52	1.34	2.121	OI				2.52
19.583	1.44	1.36	2.122	O				2.52
19.667	1.26	1.36	2.122	O				2.52
19.750	1.22	1.34	2.121	O				2.52
19.833	1.10	1.32	2.120	O				2.52
19.917	0.89	1.28	2.118	IO				2.52
20.000	0.84	1.23	2.115	IO				2.52
20.083	0.91	1.19	2.113	IO				2.51
20.167	1.09	1.17	2.112	O				2.51
20.250	1.13	1.16	2.112	O				2.51
20.333	1.15	1.16	2.111	O				2.51
20.417	1.17	1.16	2.111	O				2.51
20.500	1.17	1.16	2.111	O				2.51
20.583	1.18	1.16	2.112	O				2.51
20.667	1.18	1.16	2.112	O				2.51
20.750	1.18	1.17	2.112	O				2.51
20.833	1.07	1.16	2.111	O				2.51
20.917	0.88	1.14	2.110	IO				2.51
21.000	0.83	1.10	2.108	IO				2.51
21.083	0.91	1.08	2.107	IO				2.51
21.167	1.09	1.07	2.106	O				2.51
21.250	1.13	1.07	2.107	O				2.51
21.333	1.05	1.08	2.107	O				2.51
21.417	0.87	1.06	2.106	IO				2.51
21.500	0.83	1.04	2.105	IO				2.50
21.583	0.91	1.02	2.104	IO				2.50
21.667	1.09	1.01	2.104	O				2.50
21.750	1.13	1.03	2.104	O				2.50
21.833	1.05	1.03	2.105	O				2.50
21.917	0.87	1.03	2.104	IO				2.50
22.000	0.83	1.00	2.103	IO				2.50
22.083	0.91	0.99	2.102	O				2.50
22.167	1.09	0.99	2.102	OI				2.50
22.250	1.13	1.00	2.103	O				2.50
22.333	1.05	1.01	2.104	O				2.50
22.417	0.87	1.01	2.103	IO				2.50
22.500	0.83	0.99	2.102	O				2.50
22.583	0.81	0.97	2.101	O				2.50
22.667	0.80	0.95	2.100	O				2.50
22.750	0.79	0.95	2.099	O				2.50
22.833	0.78	0.95	2.098	O				2.50
22.917	0.78	0.95	2.097	O				2.50
23.000	0.78	0.95	2.095	O				2.50
23.083	0.78	0.95	2.094	O				2.49
23.167	0.78	0.95	2.093	O				2.49
23.250	0.78	0.95	2.092	O				2.49
23.333	0.78	0.94	2.091	O				2.49
23.417	0.78	0.94	2.090	O				2.49
23.500	0.78	0.94	2.089	O				2.49
23.583	0.78	0.94	2.088	O				2.49
23.667	0.78	0.94	2.087	O				2.49
23.750	0.78	0.94	2.086	O				2.48
23.833	0.78	0.94	2.084	O				2.48
23.917	0.78	0.94	2.083	O				2.48
24.000	0.78	0.94	2.082	O				2.48
24.083	0.57	0.94	2.081	O				2.48
24.167	0.19	0.94	2.077	IO				2.47
24.250	0.09	0.93	2.071	IO				2.47
24.333	0.05	0.93	2.065	IO				2.46
24.417	0.02	0.93	2.059	IO				2.46
24.500	0.01	0.92	2.053	IO				2.45
24.583	0.00	0.92	2.047	IO				2.44
24.667	0.00	0.92	2.040	IO				2.44
24.750	0.00	0.91	2.034	IO				2.43
24.833	0.00	0.91	2.028	IO				2.42
24.917	0.00	0.91	2.021	IO				2.41
25.000	0.00	0.90	2.015	IO				2.41
25.083	0.00	0.90	2.009	IO				2.40
25.167	0.00	0.90	2.003	IO				2.39
25.250	0.00	0.89	1.997	IO				2.39
25.333	0.00	0.89	1.991	IO				2.38
25.417	0.00	0.88	1.984	IO				2.37
25.500	0.00	0.88	1.978	IO				2.37
25.583	0.00	0.88	1.972	IO				2.36
25.667	0.00	0.87	1.966	IO				2.35
25.750	0.00	0.87	1.960	IO				2.35
25.833	0.00	0.87	1.954	IO				2.34
25.917	0.00	0.86	1.948	IO				2.34
26.000	0.00	0.86	1.942	IO				2.33
26.083	0.00	0.86	1.936	IO				2.32
26.167	0.00	0.85	1.931	IO				2.32

26.250	0.00	0.85	1.925	IO					2.31
26.333	0.00	0.85	1.919	IO					2.30
26.417	0.00	0.84	1.913	IO					2.30
26.500	0.00	0.84	1.907	IO					2.29
26.583	0.00	0.84	1.901	IO					2.28
26.667	0.00	0.83	1.896	IO					2.28
26.750	0.00	0.83	1.890	IO					2.27
26.833	0.00	0.83	1.884	IO					2.27
26.917	0.00	0.82	1.879	IO					2.26
27.000	0.00	0.82	1.873	IO					2.25
27.083	0.00	0.82	1.867	IO					2.25
27.167	0.00	0.81	1.862	IO					2.24
27.250	0.00	0.80	1.856	IO					2.23
27.333	0.00	0.80	1.851	IO					2.23
27.417	0.00	0.79	1.845	IO					2.22
27.500	0.00	0.78	1.840	IO					2.22
27.583	0.00	0.78	1.834	IO					2.21
27.667	0.00	0.77	1.829	IO					2.20
27.750	0.00	0.76	1.824	IO					2.20
27.833	0.00	0.76	1.818	IO					2.19
27.917	0.00	0.75	1.813	IO					2.19
28.000	0.00	0.74	1.808	IO					2.18
28.083	0.00	0.74	1.803	IO					2.18
28.167	0.00	0.73	1.798	IO					2.17
28.250	0.00	0.73	1.793	IO					2.16
28.333	0.00	0.72	1.788	IO					2.16
28.417	0.00	0.71	1.783	IO					2.15
28.500	0.00	0.71	1.778	IO					2.15
28.583	0.00	0.70	1.773	IO					2.14
28.667	0.00	0.70	1.768	IO					2.14
28.750	0.00	0.69	1.764	IO					2.13
28.833	0.00	0.68	1.759	IO					2.13
28.917	0.00	0.68	1.754	IO					2.12
29.000	0.00	0.67	1.750	IO					2.12
29.083	0.00	0.67	1.745	IO					2.11
29.167	0.00	0.66	1.740	IO					2.10
29.250	0.00	0.66	1.736	IO					2.10
29.333	0.00	0.65	1.731	IO					2.09
29.417	0.00	0.64	1.727	IO					2.09
29.500	0.00	0.64	1.723	IO					2.08
29.583	0.00	0.63	1.718	IO					2.08
29.667	0.00	0.63	1.714	IO					2.08
29.750	0.00	0.62	1.709	IO					2.07
29.833	0.00	0.62	1.705	IO					2.07
29.917	0.00	0.61	1.701	IO					2.06
30.000	0.00	0.61	1.697	IO					2.06
30.083	0.00	0.60	1.693	IO					2.05
30.167	0.00	0.60	1.688	IO					2.05
30.250	0.00	0.59	1.684	IO					2.04
30.333	0.00	0.59	1.680	IO					2.04
30.417	0.00	0.58	1.676	IO					2.03
30.500	0.00	0.58	1.672	IO					2.03
30.583	0.00	0.57	1.668	IO					2.02
30.667	0.00	0.57	1.664	IO					2.02
30.750	0.00	0.56	1.660	IO					2.02
30.833	0.00	0.56	1.657	IO					2.01
30.917	0.00	0.55	1.653	IO					2.01
31.000	0.00	0.55	1.649	IO					2.00
31.083	0.00	0.54	1.645	IO					2.00
31.167	0.00	0.54	1.641	IO					1.99
31.250	0.00	0.54	1.638	IO					1.99
31.333	0.00	0.53	1.634	IO					1.99
31.417	0.00	0.53	1.630	IO					1.98
31.500	0.00	0.52	1.627	IO					1.98
31.583	0.00	0.52	1.623	IO					1.97
31.667	0.00	0.51	1.620	IO					1.97
31.750	0.00	0.51	1.616	IO					1.97
31.833	0.00	0.51	1.613	IO					1.96
31.917	0.00	0.50	1.609	IO					1.96
32.000	0.00	0.50	1.606	IO					1.95
32.083	0.00	0.49	1.602	O					1.95
32.167	0.00	0.49	1.599	O					1.95
32.250	0.00	0.48	1.596	O					1.94
32.333	0.00	0.48	1.592	O					1.94
32.417	0.00	0.48	1.589	O					1.94
32.500	0.00	0.47	1.586	O					1.93
32.583	0.00	0.47	1.583	O					1.93
32.667	0.00	0.46	1.579	O					1.92
32.750	0.00	0.46	1.576	O					1.92
32.833	0.00	0.46	1.573	O					1.92
32.917	0.00	0.45	1.570	O					1.91
33.000	0.00	0.45	1.567	O					1.91
33.083	0.00	0.45	1.564	O					1.91
33.167	0.00	0.44	1.561	O					1.90
33.250	0.00	0.44	1.558	O					1.90
33.333	0.00	0.43	1.555	O					1.90
33.417	0.00	0.43	1.552	O					1.89
33.500	0.00	0.43	1.549	O					1.89
33.583	0.00	0.42	1.546	O					1.89
33.667	0.00	0.42	1.543	O					1.88
33.750	0.00	0.42	1.540	O					1.88
33.833	0.00	0.41	1.537	O					1.88
33.917	0.00	0.41	1.534	O					1.87
34.000	0.00	0.41	1.531	O					1.87
34.083	0.00	0.40	1.529	O					1.87
34.167	0.00	0.40	1.526	O					1.86
34.250	0.00	0.40	1.523	O					1.86

34.333	0.00	0.39	1.520	O					1.86
34.417	0.00	0.39	1.518	O					1.86
34.500	0.00	0.39	1.515	O					1.85
34.583	0.00	0.38	1.512	O					1.85
34.667	0.00	0.38	1.510	O					1.85
34.750	0.00	0.38	1.507	O					1.84
34.833	0.00	0.37	1.505	O					1.84
34.917	0.00	0.37	1.502	O					1.84
35.000	0.00	0.37	1.500	O					1.84
35.083	0.00	0.36	1.497	O					1.83
35.167	0.00	0.36	1.495	O					1.83
35.250	0.00	0.36	1.492	O					1.83
35.333	0.00	0.35	1.490	O					1.82
35.417	0.00	0.35	1.487	O					1.82
35.500	0.00	0.35	1.485	O					1.82
35.583	0.00	0.35	1.482	O					1.82
35.667	0.00	0.34	1.480	O					1.81
35.750	0.00	0.34	1.478	O					1.81
35.833	0.00	0.34	1.475	O					1.81
35.917	0.00	0.33	1.473	O					1.81
36.000	0.00	0.33	1.471	O					1.80
36.083	0.00	0.33	1.468	O					1.80
36.167	0.00	0.33	1.466	O					1.80
36.250	0.00	0.32	1.464	O					1.80
36.333	0.00	0.32	1.462	O					1.79
36.417	0.00	0.32	1.460	O					1.79
36.500	0.00	0.32	1.457	O					1.79
36.583	0.00	0.31	1.455	O					1.79
36.667	0.00	0.31	1.453	O					1.78
36.750	0.00	0.31	1.451	O					1.78
36.833	0.00	0.30	1.449	O					1.78
36.917	0.00	0.30	1.447	O					1.78
37.000	0.00	0.30	1.445	O					1.77
37.083	0.00	0.30	1.443	O					1.77
37.167	0.00	0.29	1.441	O					1.77
37.250	0.00	0.29	1.439	O					1.77
37.333	0.00	0.29	1.437	O					1.76
37.417	0.00	0.29	1.435	O					1.76
37.500	0.00	0.28	1.433	O					1.76
37.583	0.00	0.28	1.431	O					1.76
37.667	0.00	0.28	1.429	O					1.76
37.750	0.00	0.28	1.427	O					1.75
37.833	0.00	0.28	1.425	O					1.75
37.917	0.00	0.27	1.423	O					1.75
38.000	0.00	0.27	1.421	O					1.75
38.083	0.00	0.27	1.419	O					1.75
38.167	0.00	0.27	1.417	O					1.74
38.250	0.00	0.26	1.416	O					1.74
38.333	0.00	0.26	1.414	O					1.74
38.417	0.00	0.26	1.412	O					1.74
38.500	0.00	0.26	1.410	O					1.74
38.583	0.00	0.26	1.408	O					1.73
38.667	0.00	0.25	1.407	O					1.73
38.750	0.00	0.25	1.405	O					1.73
38.833	0.00	0.25	1.403	O					1.73
38.917	0.00	0.25	1.402	O					1.73
39.000	0.00	0.24	1.400	O					1.72
39.083	0.00	0.24	1.398	O					1.72
39.167	0.00	0.24	1.397	O					1.72
39.250	0.00	0.24	1.395	O					1.72
39.333	0.00	0.24	1.393	O					1.72
39.417	0.00	0.23	1.392	O					1.71
39.500	0.00	0.23	1.390	O					1.71
39.583	0.00	0.23	1.388	O					1.71
39.667	0.00	0.23	1.387	O					1.71
39.750	0.00	0.23	1.385	O					1.71
39.833	0.00	0.22	1.384	O					1.71
39.917	0.00	0.22	1.382	O					1.70
40.000	0.00	0.22	1.381	O					1.70
40.083	0.00	0.22	1.379	O					1.70
40.167	0.00	0.22	1.378	O					1.70
40.250	0.00	0.22	1.376	O					1.70
40.333	0.00	0.21	1.375	O					1.70
40.417	0.00	0.21	1.373	O					1.69
40.500	0.00	0.21	1.372	O					1.69
40.583	0.00	0.21	1.370	O					1.69
40.667	0.00	0.21	1.369	O					1.69
40.750	0.00	0.20	1.367	O					1.69
40.833	0.00	0.20	1.366	O					1.69
40.917	0.00	0.20	1.365	O					1.68
41.000	0.00	0.20	1.363	O					1.68
41.083	0.00	0.20	1.362	O					1.68
41.167	0.00	0.20	1.361	O					1.68
41.250	0.00	0.19	1.359	O					1.68
41.333	0.00	0.19	1.358	O					1.68
41.417	0.00	0.19	1.357	O					1.68
41.500	0.00	0.19	1.355	O					1.67
41.583	0.00	0.19	1.354	O					1.67
41.667	0.00	0.19	1.353	O					1.67
41.750	0.00	0.19	1.351	O					1.67
41.833	0.00	0.18	1.350	O					1.67
41.917	0.00	0.18	1.349	O					1.67
42.000	0.00	0.18	1.348	O					1.67
42.083	0.00	0.18	1.346	O					1.66
42.167	0.00	0.18	1.345	O					1.66
42.250	0.00	0.18	1.344	O					1.66
42.333	0.00	0.17	1.343	O					1.66

42.417	0.00	0.17	1.341	O					1.66
42.500	0.00	0.17	1.340	O					1.66
42.583	0.00	0.17	1.339	O					1.66
42.667	0.00	0.17	1.338	O					1.65
42.750	0.00	0.17	1.337	O					1.65
42.833	0.00	0.17	1.336	O					1.65
42.917	0.00	0.16	1.335	O					1.65
43.000	0.00	0.16	1.333	O					1.65
43.083	0.00	0.16	1.332	O					1.65
43.167	0.00	0.16	1.331	O					1.65
43.250	0.00	0.16	1.330	O					1.65
43.333	0.00	0.16	1.329	O					1.64
43.417	0.00	0.16	1.328	O					1.64
43.500	0.00	0.16	1.327	O					1.64
43.583	0.00	0.15	1.326	O					1.64
43.667	0.00	0.15	1.325	O					1.64
43.750	0.00	0.15	1.324	O					1.64
43.833	0.00	0.15	1.323	O					1.64
43.917	0.00	0.15	1.322	O					1.64
44.000	0.00	0.15	1.321	O					1.63
44.083	0.00	0.15	1.320	O					1.63
44.167	0.00	0.15	1.319	O					1.63
44.250	0.00	0.14	1.318	O					1.63
44.333	0.00	0.14	1.317	O					1.63
44.417	0.00	0.14	1.316	O					1.63
44.500	0.00	0.14	1.315	O					1.63
44.583	0.00	0.14	1.314	O					1.63
44.667	0.00	0.14	1.313	O					1.63
44.750	0.00	0.14	1.312	O					1.63
44.833	0.00	0.14	1.311	O					1.62
44.917	0.00	0.13	1.310	O					1.62
45.000	0.00	0.13	1.309	O					1.62
45.083	0.00	0.13	1.308	O					1.62
45.167	0.00	0.13	1.307	O					1.62
45.250	0.00	0.13	1.306	O					1.62
45.333	0.00	0.13	1.305	O					1.62
45.417	0.00	0.13	1.304	O					1.62
45.500	0.00	0.13	1.304	O					1.62
45.583	0.00	0.13	1.303	O					1.61
45.667	0.00	0.12	1.302	O					1.61
45.750	0.00	0.12	1.301	O					1.61
45.833	0.00	0.12	1.300	O					1.61
45.917	0.00	0.12	1.299	O					1.61
46.000	0.00	0.12	1.298	O					1.61
46.083	0.00	0.12	1.298	O					1.61
46.167	0.00	0.12	1.297	O					1.61
46.250	0.00	0.12	1.296	O					1.61
46.333	0.00	0.12	1.295	O					1.61
46.417	0.00	0.12	1.294	O					1.61
46.500	0.00	0.11	1.294	O					1.60
46.583	0.00	0.11	1.293	O					1.60
46.667	0.00	0.11	1.292	O					1.60
46.750	0.00	0.11	1.291	O					1.60
46.833	0.00	0.11	1.291	O					1.60
46.917	0.00	0.11	1.290	O					1.60
47.000	0.00	0.11	1.289	O					1.60
47.083	0.00	0.11	1.288	O					1.60
47.167	0.00	0.11	1.288	O					1.60
47.250	0.00	0.11	1.287	O					1.60
47.333	0.00	0.11	1.286	O					1.60
47.417	0.00	0.10	1.285	O					1.60
47.500	0.00	0.10	1.285	O					1.59
47.583	0.00	0.10	1.284	O					1.59
47.667	0.00	0.10	1.283	O					1.59
47.750	0.00	0.10	1.282	O					1.59
47.833	0.00	0.10	1.282	O					1.59
47.917	0.00	0.10	1.281	O					1.59
48.000	0.00	0.10	1.280	O					1.59
48.083	0.00	0.10	1.280	O					1.59
48.167	0.00	0.10	1.279	O					1.59
48.250	0.00	0.10	1.278	O					1.59
48.333	0.00	0.10	1.278	O					1.59
48.417	0.00	0.09	1.277	O					1.59
48.500	0.00	0.09	1.276	O					1.59
48.583	0.00	0.09	1.276	O					1.58
48.667	0.00	0.09	1.275	O					1.58
48.750	0.00	0.09	1.275	O					1.58
48.833	0.00	0.09	1.274	O					1.58
48.917	0.00	0.09	1.273	O					1.58
49.000	0.00	0.09	1.273	O					1.58
49.083	0.00	0.09	1.272	O					1.58
49.167	0.00	0.09	1.271	O					1.58
49.250	0.00	0.09	1.271	O					1.58
49.333	0.00	0.09	1.270	O					1.58
49.417	0.00	0.09	1.270	O					1.58
49.500	0.00	0.08	1.269	O					1.58
49.583	0.00	0.08	1.269	O					1.58
49.667	0.00	0.08	1.268	O					1.58
49.750	0.00	0.08	1.267	O					1.58
49.833	0.00	0.08	1.267	O					1.57
49.917	0.00	0.08	1.266	O					1.57
50.000	0.00	0.08	1.266	O					1.57
50.083	0.00	0.08	1.265	O					1.57
50.167	0.00	0.08	1.265	O					1.57
50.250	0.00	0.08	1.264	O					1.57
50.333	0.00	0.08	1.264	O					1.57
50.417	0.00	0.08	1.263	O					1.57

50.500	0.00	0.08	1.262	O					1.57
50.583	0.00	0.08	1.262	O					1.57
50.667	0.00	0.08	1.261	O					1.57
50.750	0.00	0.07	1.261	O					1.57
50.833	0.00	0.07	1.260	O					1.57
50.917	0.00	0.07	1.260	O					1.57
51.000	0.00	0.07	1.259	O					1.57
51.083	0.00	0.07	1.259	O					1.57
51.167	0.00	0.07	1.258	O					1.57
51.250	0.00	0.07	1.258	O					1.56
51.333	0.00	0.07	1.257	O					1.56
51.417	0.00	0.07	1.257	O					1.56
51.500	0.00	0.07	1.256	O					1.56
51.583	0.00	0.07	1.256	O					1.56
51.667	0.00	0.07	1.256	O					1.56
51.750	0.00	0.07	1.255	O					1.56
51.833	0.00	0.07	1.255	O					1.56
51.917	0.00	0.07	1.254	O					1.56
52.000	0.00	0.07	1.254	O					1.56
52.083	0.00	0.07	1.253	O					1.56
52.167	0.00	0.06	1.253	O					1.56
52.250	0.00	0.06	1.252	O					1.56
52.333	0.00	0.06	1.252	O					1.56
52.417	0.00	0.06	1.251	O					1.56
52.500	0.00	0.06	1.251	O					1.56
52.583	0.00	0.06	1.251	O					1.56
52.667	0.00	0.06	1.250	O					1.56
52.750	0.00	0.06	1.250	O					1.56
52.833	0.00	0.06	1.249	O					1.56
52.917	0.00	0.06	1.249	O					1.55
53.000	0.00	0.06	1.249	O					1.55
53.083	0.00	0.06	1.248	O					1.55
53.167	0.00	0.06	1.248	O					1.55
53.250	0.00	0.06	1.247	O					1.55
53.333	0.00	0.06	1.247	O					1.55
53.417	0.00	0.06	1.247	O					1.55
53.500	0.00	0.06	1.246	O					1.55
53.583	0.00	0.06	1.246	O					1.55
53.667	0.00	0.06	1.245	O					1.55
53.750	0.00	0.06	1.245	O					1.55
53.833	0.00	0.05	1.245	O					1.55
53.917	0.00	0.05	1.244	O					1.55
54.000	0.00	0.05	1.244	O					1.55
54.083	0.00	0.05	1.243	O					1.55
54.167	0.00	0.05	1.243	O					1.55
54.250	0.00	0.05	1.243	O					1.55
54.333	0.00	0.05	1.242	O					1.55
54.417	0.00	0.05	1.242	O					1.55
54.500	0.00	0.05	1.242	O					1.55
54.583	0.00	0.05	1.241	O					1.55
54.667	0.00	0.05	1.241	O					1.55
54.750	0.00	0.05	1.241	O					1.55
54.833	0.00	0.05	1.240	O					1.55
54.917	0.00	0.05	1.240	O					1.54
55.000	0.00	0.05	1.240	O					1.54
55.083	0.00	0.05	1.239	O					1.54
55.167	0.00	0.05	1.239	O					1.54
55.250	0.00	0.05	1.239	O					1.54
55.333	0.00	0.05	1.238	O					1.54
55.417	0.00	0.05	1.238	O					1.54
55.500	0.00	0.05	1.238	O					1.54
55.583	0.00	0.05	1.237	O					1.54
55.667	0.00	0.05	1.237	O					1.54
55.750	0.00	0.04	1.237	O					1.54
55.833	0.00	0.04	1.236	O					1.54
55.917	0.00	0.04	1.236	O					1.54
56.000	0.00	0.04	1.236	O					1.54
56.083	0.00	0.04	1.236	O					1.54
56.167	0.00	0.04	1.235	O					1.54
56.250	0.00	0.04	1.235	O					1.54
56.333	0.00	0.04	1.235	O					1.54
56.417	0.00	0.04	1.234	O					1.54
56.500	0.00	0.04	1.234	O					1.54
56.583	0.00	0.04	1.234	O					1.54
56.667	0.00	0.04	1.233	O					1.54
56.750	0.00	0.04	1.233	O					1.54
56.833	0.00	0.04	1.233	O					1.54
56.917	0.00	0.04	1.233	O					1.54
57.000	0.00	0.04	1.232	O					1.54
57.083	0.00	0.04	1.232	O					1.54
57.167	0.00	0.04	1.232	O					1.54
57.250	0.00	0.04	1.232	O					1.54
57.333	0.00	0.04	1.231	O					1.54
57.417	0.00	0.04	1.231	O					1.53
57.500	0.00	0.04	1.231	O					1.53
57.583	0.00	0.04	1.231	O					1.53
57.667	0.00	0.04	1.230	O					1.53
57.750	0.00	0.04	1.230	O					1.53
57.833	0.00	0.04	1.230	O					1.53
57.917	0.00	0.04	1.230	O					1.53
58.000	0.00	0.04	1.229	O					1.53
58.083	0.00	0.04	1.229	O					1.53
58.167	0.00	0.04	1.229	O					1.53
58.250	0.00	0.03	1.229	O					1.53
58.333	0.00	0.03	1.228	O					1.53
58.417	0.00	0.03	1.228	O					1.53
58.500	0.00	0.03	1.228	O					1.53

58.583	0.00	0.03	1.228	O					1.53
58.667	0.00	0.03	1.227	O					1.53
58.750	0.00	0.03	1.227	O					1.53
58.833	0.00	0.03	1.227	O					1.53
58.917	0.00	0.03	1.227	O					1.53
59.000	0.00	0.03	1.226	O					1.53
59.083	0.00	0.03	1.226	O					1.53
59.167	0.00	0.03	1.226	O					1.53
59.250	0.00	0.03	1.226	O					1.53
59.333	0.00	0.03	1.226	O					1.53
59.417	0.00	0.03	1.225	O					1.53
59.500	0.00	0.03	1.225	O					1.53
59.583	0.00	0.03	1.225	O					1.53
59.667	0.00	0.03	1.225	O					1.53
59.750	0.00	0.03	1.225	O					1.53
59.833	0.00	0.03	1.224	O					1.53
59.917	0.00	0.03	1.224	O					1.53
60.000	0.00	0.03	1.224	O					1.53
60.083	0.00	0.03	1.224	O					1.53
60.167	0.00	0.03	1.223	O					1.53
60.250	0.00	0.03	1.223	O					1.53
60.333	0.00	0.03	1.223	O					1.53
60.417	0.00	0.03	1.223	O					1.53
60.500	0.00	0.03	1.223	O					1.53
60.583	0.00	0.03	1.223	O					1.53
60.667	0.00	0.03	1.222	O					1.53
60.750	0.00	0.03	1.222	O					1.52
60.833	0.00	0.03	1.222	O					1.52
60.917	0.00	0.03	1.222	O					1.52
61.000	0.00	0.03	1.222	O					1.52
61.083	0.00	0.03	1.221	O					1.52
61.167	0.00	0.03	1.221	O					1.52
61.250	0.00	0.03	1.221	O					1.52
61.333	0.00	0.03	1.221	O					1.52
61.417	0.00	0.03	1.221	O					1.52
61.500	0.00	0.03	1.221	O					1.52
61.583	0.00	0.02	1.220	O					1.52
61.667	0.00	0.02	1.220	O					1.52
61.750	0.00	0.02	1.220	O					1.52
61.833	0.00	0.02	1.220	O					1.52
61.917	0.00	0.02	1.220	O					1.52
62.000	0.00	0.02	1.220	O					1.52
62.083	0.00	0.02	1.219	O					1.52
62.167	0.00	0.02	1.219	O					1.52
62.250	0.00	0.02	1.219	O					1.52
62.333	0.00	0.02	1.219	O					1.52
62.417	0.00	0.02	1.219	O					1.52
62.500	0.00	0.02	1.219	O					1.52
62.583	0.00	0.02	1.218	O					1.52
62.667	0.00	0.02	1.218	O					1.52
62.750	0.00	0.02	1.218	O					1.52
62.833	0.00	0.02	1.218	O					1.52
62.917	0.00	0.02	1.218	O					1.52
63.000	0.00	0.02	1.218	O					1.52
63.083	0.00	0.02	1.217	O					1.52
63.167	0.00	0.02	1.217	O					1.52
63.250	0.00	0.02	1.217	O					1.52
63.333	0.00	0.02	1.217	O					1.52
63.417	0.00	0.02	1.217	O					1.52
63.500	0.00	0.02	1.217	O					1.52
63.583	0.00	0.02	1.217	O					1.52
63.667	0.00	0.02	1.216	O					1.52
63.750	0.00	0.02	1.216	O					1.52
63.833	0.00	0.02	1.216	O					1.52
63.917	0.00	0.02	1.216	O					1.52
64.000	0.00	0.02	1.216	O					1.52
64.083	0.00	0.02	1.216	O					1.52
64.167	0.00	0.02	1.216	O					1.52
64.250	0.00	0.02	1.216	O					1.52
64.333	0.00	0.02	1.215	O					1.52
64.417	0.00	0.02	1.215	O					1.52
64.500	0.00	0.02	1.215	O					1.52
64.583	0.00	0.02	1.215	O					1.52
64.667	0.00	0.02	1.215	O					1.52
64.750	0.00	0.02	1.215	O					1.52
64.833	0.00	0.02	1.215	O					1.52
64.917	0.00	0.02	1.215	O					1.52
65.000	0.00	0.02	1.214	O					1.52
65.083	0.00	0.02	1.214	O					1.52
65.167	0.00	0.02	1.214	O					1.52
65.250	0.00	0.02	1.214	O					1.52
65.333	0.00	0.02	1.214	O					1.52
65.417	0.00	0.02	1.214	O					1.52
65.500	0.00	0.02	1.214	O					1.52
65.583	0.00	0.02	1.214	O					1.52
65.667	0.00	0.02	1.213	O					1.52
65.750	0.00	0.02	1.213	O					1.51
65.833	0.00	0.02	1.213	O					1.51
65.917	0.00	0.02	1.213	O					1.51
66.000	0.00	0.02	1.213	O					1.51
66.083	0.00	0.02	1.213	O					1.51
66.167	0.00	0.02	1.213	O					1.51
66.250	0.00	0.02	1.213	O					1.51
66.333	0.00	0.02	1.213	O					1.51
66.417	0.00	0.02	1.212	O					1.51
66.500	0.00	0.02	1.212	O					1.51
66.583	0.00	0.02	1.212	O					1.51

66.667	0.00	0.01	1.212	O					1.51
66.750	0.00	0.01	1.212	O					1.51
66.833	0.00	0.01	1.212	O					1.51
66.917	0.00	0.01	1.212	O					1.51
67.000	0.00	0.01	1.212	O					1.51
67.083	0.00	0.01	1.212	O					1.51
67.167	0.00	0.01	1.212	O					1.51
67.250	0.00	0.01	1.211	O					1.51
67.333	0.00	0.01	1.211	O					1.51
67.417	0.00	0.01	1.211	O					1.51
67.500	0.00	0.01	1.211	O					1.51
67.583	0.00	0.01	1.211	O					1.51
67.667	0.00	0.01	1.211	O					1.51
67.750	0.00	0.01	1.211	O					1.51
67.833	0.00	0.01	1.211	O					1.51
67.917	0.00	0.01	1.211	O					1.51
68.000	0.00	0.01	1.211	O					1.51
68.083	0.00	0.01	1.211	O					1.51
68.167	0.00	0.01	1.210	O					1.51
68.250	0.00	0.01	1.210	O					1.51
68.333	0.00	0.01	1.210	O					1.51
68.417	0.00	0.01	1.210	O					1.51
68.500	0.00	0.01	1.210	O					1.51
68.583	0.00	0.01	1.210	O					1.51
68.667	0.00	0.01	1.210	O					1.51
68.750	0.00	0.01	1.210	O					1.51
68.833	0.00	0.01	1.210	O					1.51
68.917	0.00	0.01	1.210	O					1.51
69.000	0.00	0.01	1.210	O					1.51
69.083	0.00	0.01	1.210	O					1.51
69.167	0.00	0.01	1.209	O					1.51
69.250	0.00	0.01	1.209	O					1.51
69.333	0.00	0.01	1.209	O					1.51
69.417	0.00	0.01	1.209	O					1.51
69.500	0.00	0.01	1.209	O					1.51
69.583	0.00	0.01	1.209	O					1.51
69.667	0.00	0.01	1.209	O					1.51
69.750	0.00	0.01	1.209	O					1.51
69.833	0.00	0.01	1.209	O					1.51
69.917	0.00	0.01	1.209	O					1.51
70.000	0.00	0.01	1.209	O					1.51
70.083	0.00	0.01	1.209	O					1.51
70.167	0.00	0.01	1.209	O					1.51
70.250	0.00	0.01	1.208	O					1.51
70.333	0.00	0.01	1.208	O					1.51
70.417	0.00	0.01	1.208	O					1.51
70.500	0.00	0.01	1.208	O					1.51
70.583	0.00	0.01	1.208	O					1.51
70.667	0.00	0.01	1.208	O					1.51
70.750	0.00	0.01	1.208	O					1.51
70.833	0.00	0.01	1.208	O					1.51
70.917	0.00	0.01	1.208	O					1.51
71.000	0.00	0.01	1.208	O					1.51
71.083	0.00	0.01	1.208	O					1.51
71.167	0.00	0.01	1.208	O					1.51
71.250	0.00	0.01	1.208	O					1.51
71.333	0.00	0.01	1.208	O					1.51
71.417	0.00	0.01	1.208	O					1.51
71.500	0.00	0.01	1.207	O					1.51
71.583	0.00	0.01	1.207	O					1.51
71.667	0.00	0.01	1.207	O					1.51
71.750	0.00	0.01	1.207	O					1.51
71.833	0.00	0.01	1.207	O					1.51
71.917	0.00	0.01	1.207	O					1.51
72.000	0.00	0.01	1.207	O					1.51
72.083	0.00	0.01	1.207	O					1.51
72.167	0.00	0.01	1.207	O					1.51
72.250	0.00	0.01	1.207	O					1.51
72.333	0.00	0.01	1.207	O					1.51
72.417	0.00	0.01	1.207	O					1.51
72.500	0.00	0.01	1.207	O					1.51
72.583	0.00	0.01	1.207	O					1.51
72.667	0.00	0.01	1.207	O					1.51
72.750	0.00	0.01	1.207	O					1.51
72.833	0.00	0.01	1.207	O					1.51
72.917	0.00	0.01	1.206	O					1.51
73.000	0.00	0.01	1.206	O					1.51
73.083	0.00	0.01	1.206	O					1.51
73.167	0.00	0.01	1.206	O					1.51
73.250	0.00	0.01	1.206	O					1.51
73.333	0.00	0.01	1.206	O					1.51
73.417	0.00	0.01	1.206	O					1.51
73.500	0.00	0.01	1.206	O					1.51
73.583	0.00	0.01	1.206	O					1.51
73.667	0.00	0.01	1.206	O					1.51
73.750	0.00	0.01	1.206	O					1.51
73.833	0.00	0.01	1.206	O					1.51
73.917	0.00	0.01	1.206	O					1.51
74.000	0.00	0.01	1.206	O					1.51
74.083	0.00	0.01	1.206	O					1.51
74.167	0.00	0.01	1.206	O					1.51
74.250	0.00	0.01	1.206	O					1.51
74.333	0.00	0.01	1.206	O					1.51
74.417	0.00	0.01	1.206	O					1.51
74.500	0.00	0.01	1.206	O					1.51
74.583	0.00	0.01	1.205	O					1.51
74.667	0.00	0.01	1.205	O					1.51

74.750	0.00	0.01	1.205	O					1.51
74.833	0.00	0.01	1.205	O					1.51
74.917	0.00	0.01	1.205	O					1.51
75.000	0.00	0.01	1.205	O					1.51
75.083	0.00	0.01	1.205	O					1.51
75.167	0.00	0.01	1.205	O					1.51
75.250	0.00	0.01	1.205	O					1.51
75.333	0.00	0.01	1.205	O					1.51
75.417	0.00	0.01	1.205	O					1.51
75.500	0.00	0.01	1.205	O					1.51
75.583	0.00	0.01	1.205	O					1.51
75.667	0.00	0.01	1.205	O					1.51
75.750	0.00	0.01	1.205	O					1.51
75.833	0.00	0.01	1.205	O					1.51
75.917	0.00	0.01	1.205	O					1.51
76.000	0.00	0.01	1.205	O					1.51
76.083	0.00	0.01	1.205	O					1.51
76.167	0.00	0.01	1.205	O					1.51
76.250	0.00	0.01	1.205	O					1.51
76.333	0.00	0.01	1.205	O					1.51
76.417	0.00	0.01	1.205	O					1.51
76.500	0.00	0.01	1.205	O					1.51
76.583	0.00	0.01	1.204	O					1.50
76.667	0.00	0.01	1.204	O					1.50
76.750	0.00	0.01	1.204	O					1.50
76.833	0.00	0.01	1.204	O					1.50
76.917	0.00	0.01	1.204	O					1.50
77.000	0.00	0.01	1.204	O					1.50
77.083	0.00	0.01	1.204	O					1.50
77.167	0.00	0.01	1.204	O					1.50
77.250	0.00	0.01	1.204	O					1.50
77.333	0.00	0.01	1.204	O					1.50
77.417	0.00	0.01	1.204	O					1.50
77.500	0.00	0.00	1.204	O					1.50
77.583	0.00	0.00	1.204	O					1.50
77.667	0.00	0.00	1.204	O					1.50
77.750	0.00	0.00	1.204	O					1.50
77.833	0.00	0.00	1.204	O					1.50
77.917	0.00	0.00	1.204	O					1.50
78.000	0.00	0.00	1.204	O					1.50
78.083	0.00	0.00	1.204	O					1.50
78.167	0.00	0.00	1.204	O					1.50
78.250	0.00	0.00	1.204	O					1.50
78.333	0.00	0.00	1.204	O					1.50
78.417	0.00	0.00	1.204	O					1.50
78.500	0.00	0.00	1.204	O					1.50
78.583	0.00	0.00	1.204	O					1.50
78.667	0.00	0.00	1.204	O					1.50
78.750	0.00	0.00	1.204	O					1.50
78.833	0.00	0.00	1.204	O					1.50
78.917	0.00	0.00	1.204	O					1.50
79.000	0.00	0.00	1.203	O					1.50
79.083	0.00	0.00	1.203	O					1.50
79.167	0.00	0.00	1.203	O					1.50
79.250	0.00	0.00	1.203	O					1.50
79.333	0.00	0.00	1.203	O					1.50
79.417	0.00	0.00	1.203	O					1.50
79.500	0.00	0.00	1.203	O					1.50
79.583	0.00	0.00	1.203	O					1.50
79.667	0.00	0.00	1.203	O					1.50
79.750	0.00	0.00	1.203	O					1.50
79.833	0.00	0.00	1.203	O					1.50
79.917	0.00	0.00	1.203	O					1.50
80.000	0.00	0.00	1.203	O					1.50
80.083	0.00	0.00	1.203	O					1.50
80.167	0.00	0.00	1.203	O					1.50
80.250	0.00	0.00	1.203	O					1.50
80.333	0.00	0.00	1.203	O					1.50
80.417	0.00	0.00	1.203	O					1.50
80.500	0.00	0.00	1.203	O					1.50
80.583	0.00	0.00	1.203	O					1.50
80.667	0.00	0.00	1.203	O					1.50
80.750	0.00	0.00	1.203	O					1.50
80.833	0.00	0.00	1.203	O					1.50
80.917	0.00	0.00	1.203	O					1.50
81.000	0.00	0.00	1.203	O					1.50
81.083	0.00	0.00	1.203	O					1.50
81.167	0.00	0.00	1.203	O					1.50
81.250	0.00	0.00	1.203	O					1.50
81.333	0.00	0.00	1.203	O					1.50
81.417	0.00	0.00	1.203	O					1.50
81.500	0.00	0.00	1.203	O					1.50
81.583	0.00	0.00	1.203	O					1.50
81.667	0.00	0.00	1.203	O					1.50
81.750	0.00	0.00	1.203	O					1.50
81.833	0.00	0.00	1.203	O					1.50
81.917	0.00	0.00	1.203	O					1.50
82.000	0.00	0.00	1.203	O					1.50
82.083	0.00	0.00	1.203	O					1.50
82.167	0.00	0.00	1.203	O					1.50
82.250	0.00	0.00	1.203	O					1.50
82.333	0.00	0.00	1.202	O					1.50
82.417	0.00	0.00	1.202	O					1.50
82.500	0.00	0.00	1.202	O					1.50
82.583	0.00	0.00	1.202	O					1.50
82.667	0.00	0.00	1.202	O					1.50
82.750	0.00	0.00	1.202	O					1.50

82.833	0.00	0.00	1.202	O				1.50
82.917	0.00	0.00	1.202	O				1.50
83.000	0.00	0.00	1.202	O				1.50
83.083	0.00	0.00	1.202	O				1.50
83.167	0.00	0.00	1.202	O				1.50
83.250	0.00	0.00	1.202	O				1.50
83.333	0.00	0.00	1.202	O				1.50
83.417	0.00	0.00	1.202	O				1.50
83.500	0.00	0.00	1.202	O				1.50
83.583	0.00	0.00	1.202	O				1.50
83.667	0.00	0.00	1.202	O				1.50
83.750	0.00	0.00	1.202	O				1.50
83.833	0.00	0.00	1.202	O				1.50
83.917	0.00	0.00	1.202	O				1.50
84.000	0.00	0.00	1.202	O				1.50
84.083	0.00	0.00	1.202	O				1.50
84.167	0.00	0.00	1.202	O				1.50
84.250	0.00	0.00	1.202	O				1.50
84.333	0.00	0.00	1.202	O				1.50
84.417	0.00	0.00	1.202	O				1.50
84.500	0.00	0.00	1.202	O				1.50
84.583	0.00	0.00	1.202	O				1.50
84.667	0.00	0.00	1.202	O				1.50
84.750	0.00	0.00	1.202	O				1.50
84.833	0.00	0.00	1.202	O				1.50
84.917	0.00	0.00	1.202	O				1.50
85.000	0.00	0.00	1.202	O				1.50
85.083	0.00	0.00	1.202	O				1.50
85.167	0.00	0.00	1.202	O				1.50
85.250	0.00	0.00	1.202	O				1.50
85.333	0.00	0.00	1.202	O				1.50
85.417	0.00	0.00	1.202	O				1.50
85.500	0.00	0.00	1.202	O				1.50
85.583	0.00	0.00	1.202	O				1.50
85.667	0.00	0.00	1.202	O				1.50
85.750	0.00	0.00	1.202	O				1.50
85.833	0.00	0.00	1.202	O				1.50
85.917	0.00	0.00	1.202	O				1.50
86.000	0.00	0.00	1.202	O				1.50
86.083	0.00	0.00	1.202	O				1.50
86.167	0.00	0.00	1.202	O				1.50
86.250	0.00	0.00	1.202	O				1.50
86.333	0.00	0.00	1.202	O				1.50
86.417	0.00	0.00	1.202	O				1.50
86.500	0.00	0.00	1.202	O				1.50
86.583	0.00	0.00	1.202	O				1.50
86.667	0.00	0.00	1.202	O				1.50
86.750	0.00	0.00	1.202	O				1.50
86.833	0.00	0.00	1.202	O				1.50
86.917	0.00	0.00	1.202	O				1.50
87.000	0.00	0.00	1.202	O				1.50
87.083	0.00	0.00	1.202	O				1.50
87.167	0.00	0.00	1.202	O				1.50
87.250	0.00	0.00	1.202	O				1.50
87.333	0.00	0.00	1.202	O				1.50
87.417	0.00	0.00	1.201	O				1.50
87.500	0.00	0.00	1.201	O				1.50
87.583	0.00	0.00	1.201	O				1.50
87.667	0.00	0.00	1.201	O				1.50
87.750	0.00	0.00	1.201	O				1.50
87.833	0.00	0.00	1.201	O				1.50
87.917	0.00	0.00	1.201	O				1.50
88.000	0.00	0.00	1.201	O				1.50
88.083	0.00	0.00	1.201	O				1.50
88.167	0.00	0.00	1.201	O				1.50
88.250	0.00	0.00	1.201	O				1.50
88.333	0.00	0.00	1.201	O				1.50
88.417	0.00	0.00	1.201	O				1.50
88.500	0.00	0.00	1.201	O				1.50
88.583	0.00	0.00	1.201	O				1.50
88.667	0.00	0.00	1.201	O				1.50
88.750	0.00	0.00	1.201	O				1.50
88.833	0.00	0.00	1.201	O				1.50
88.917	0.00	0.00	1.201	O				1.50
89.000	0.00	0.00	1.201	O				1.50
89.083	0.00	0.00	1.201	O				1.50
89.167	0.00	0.00	1.201	O				1.50
89.250	0.00	0.00	1.201	O				1.50
89.333	0.00	0.00	1.201	O				1.50
89.417	0.00	0.00	1.201	O				1.50
89.500	0.00	0.00	1.201	O				1.50
89.583	0.00	0.00	1.201	O				1.50
89.667	0.00	0.00	1.201	O				1.50
89.750	0.00	0.00	1.201	O				1.50
89.833	0.00	0.00	1.201	O				1.50
89.917	0.00	0.00	1.201	O				1.50
90.000	0.00	0.00	1.201	O				1.50
90.083	0.00	0.00	1.201	O				1.50
90.167	0.00	0.00	1.201	O				1.50
90.250	0.00	0.00	1.201	O				1.50
90.333	0.00	0.00	1.201	O				1.50
90.417	0.00	0.00	1.201	O				1.50
90.500	0.00	0.00	1.201	O				1.50
90.583	0.00	0.00	1.201	O				1.50
90.667	0.00	0.00	1.201	O				1.50
90.750	0.00	0.00	1.201	O				1.50
90.833	0.00	0.00	1.201	O				1.50

90.917	0.00	0.00	1.201	O					1.50
91.000	0.00	0.00	1.201	O					1.50
91.083	0.00	0.00	1.201	O					1.50
91.167	0.00	0.00	1.201	O					1.50
91.250	0.00	0.00	1.201	O					1.50
91.333	0.00	0.00	1.201	O					1.50
91.417	0.00	0.00	1.201	O					1.50
91.500	0.00	0.00	1.201	O					1.50
91.583	0.00	0.00	1.201	O					1.50
91.667	0.00	0.00	1.201	O					1.50
91.750	0.00	0.00	1.201	O					1.50
91.833	0.00	0.00	1.201	O					1.50
91.917	0.00	0.00	1.201	O					1.50
92.000	0.00	0.00	1.201	O					1.50
92.083	0.00	0.00	1.201	O					1.50
92.167	0.00	0.00	1.201	O					1.50
92.250	0.00	0.00	1.201	O					1.50
92.333	0.00	0.00	1.201	O					1.50
92.417	0.00	0.00	1.201	O					1.50
92.500	0.00	0.00	1.201	O					1.50
92.583	0.00	0.00	1.201	O					1.50
92.667	0.00	0.00	1.201	O					1.50
92.750	0.00	0.00	1.201	O					1.50
92.833	0.00	0.00	1.201	O					1.50
92.917	0.00	0.00	1.201	O					1.50
93.000	0.00	0.00	1.201	O					1.50
93.083	0.00	0.00	1.201	O					1.50
93.167	0.00	0.00	1.201	O					1.50
93.250	0.00	0.00	1.201	O					1.50
93.333	0.00	0.00	1.201	O					1.50
93.417	0.00	0.00	1.201	O					1.50

Remaining water in basin = 1.20 (Ac.Ft)

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

Number of intervals = 1121
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 13.416 (CFS)
Total volume = 7.439 (Ac.Ft)

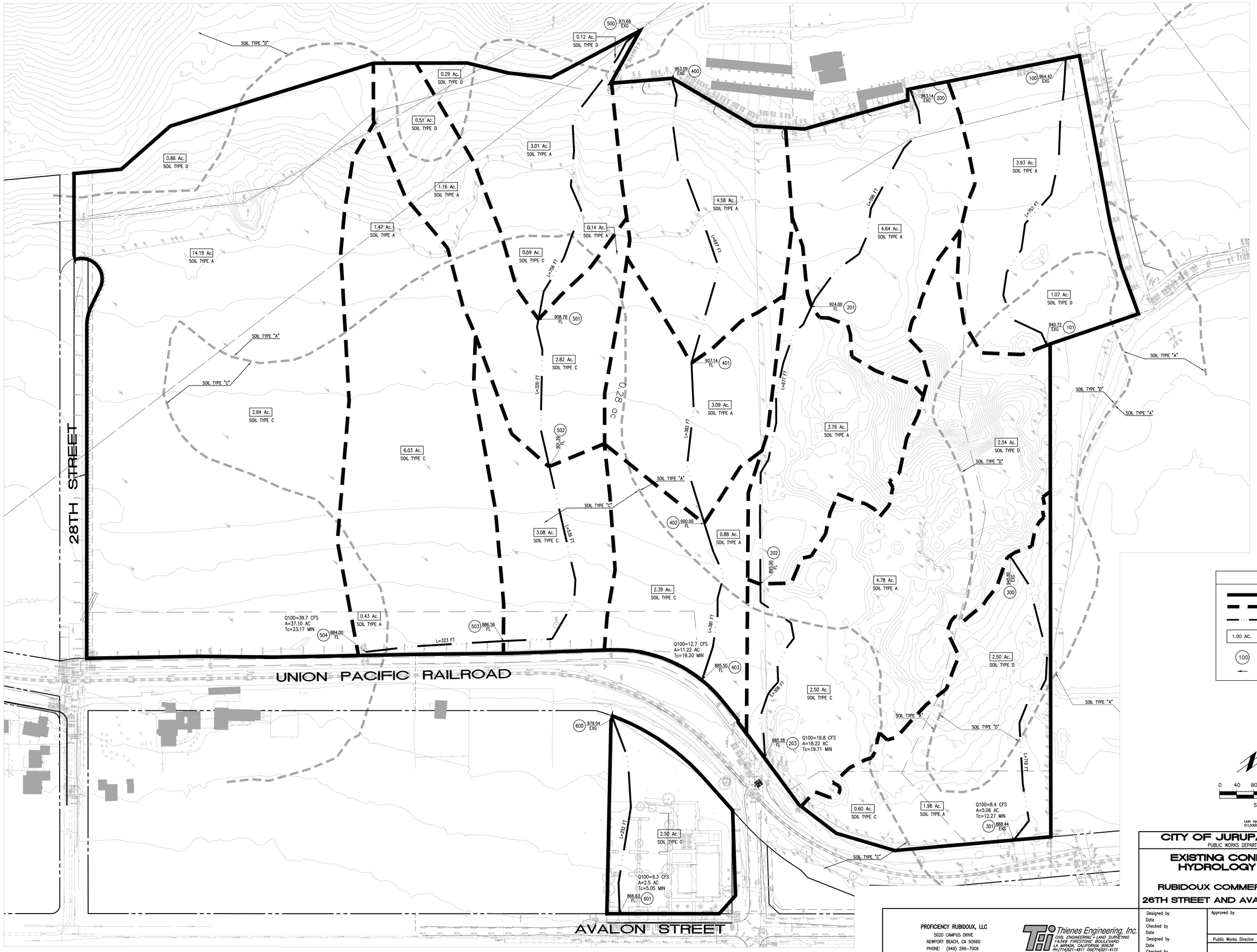
Status of hydrographs being held in storage

	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 D

HYDROLOGY MAPS



Last Updated 6/20/23
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CITY OF JURUPA VALLEY
PUBLIC WORKS DEPARTMENT

EXISTING CONDITION HYDROLOGY MAP

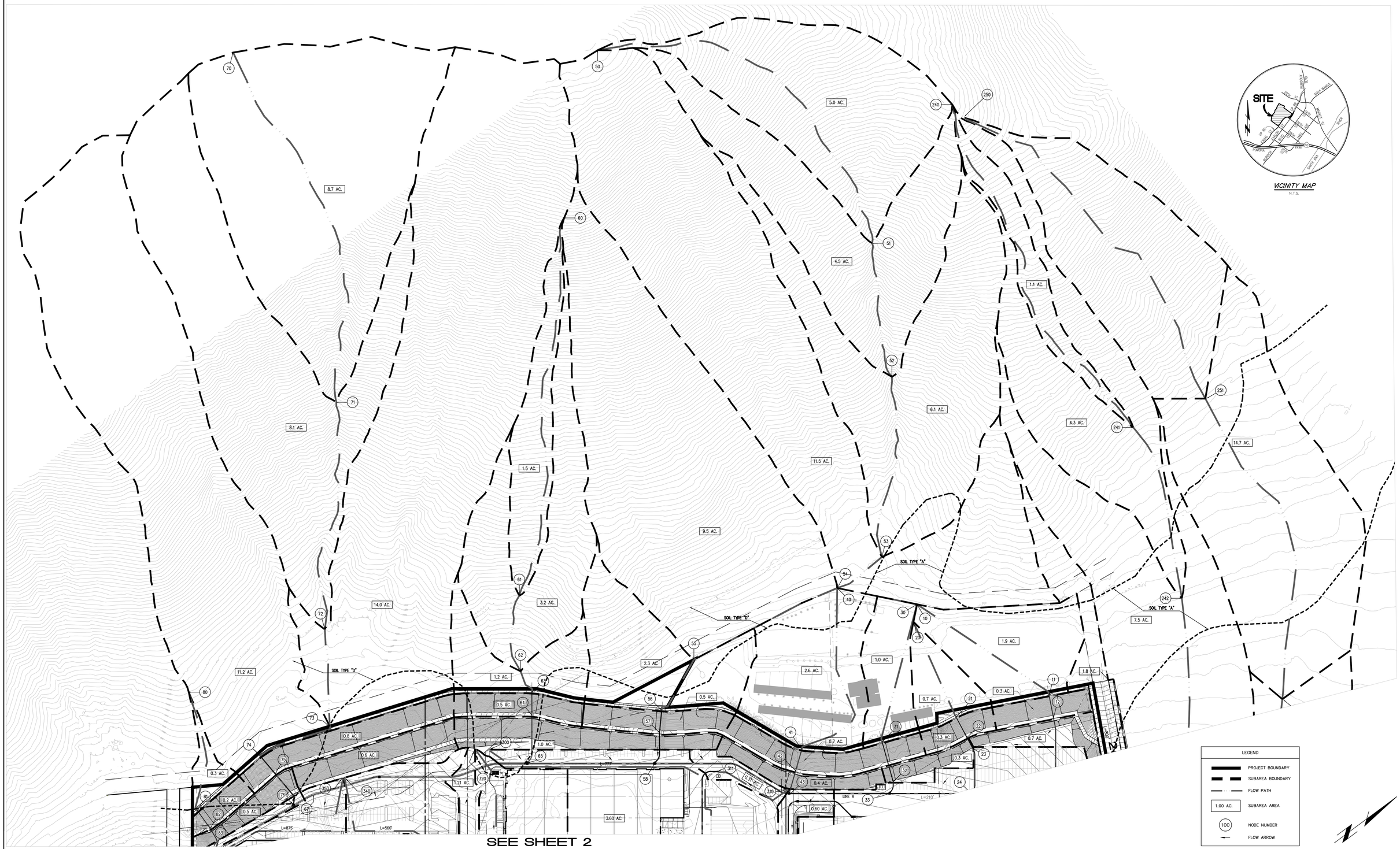
RUBIDOUX COMMERCE PARK
26TH STREET AND AVALON STREET

PROFICIENCY RUBIDOUX, LLC
5020 CAMPUS DRIVE
NEWPORT BEACH, CA 92660
PHONE: (949) 296-7006

Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH:(714)521-4811 FAX(714)521-4173

Designed by	Approved by	Date
Date		
Checked by		
Date		
Designed by	Public Works Director	R.C.E. XXXXX
Date		
Checked by		
Date	Sheet 1 of 1 Sheets	

3384/1 OF 1 SHEET


70
50
240
250
5.0 AC.
8.7 AC.
60
51
4.5 AC.
1.1 AC.
71
52
6.1 AC.
251
8.1 AC.
4.3 AC.
241
14.7 AC.
1.5 AC.
11.5 AC.
9.5 AC.
53
SOIL TYPE "A"
54
40
242
SOIL TYPE "A"
7.5 AC.
14.0 AC.
3.2 AC.
SOIL TYPE "D"
30
10
28
1.9 AC.
72
61
55
62
2.3 AC.
1.0 AC.
2.6 AC.
11.2 AC.
SOIL TYPE "D"
1.2 AC.
63
1.8 AC.
11
80
0.5 AC.
64
56
0.5 AC.
0.7 AC.
21
0.3 AC.
73
57
41
31
22
74
0.8 AC.
300
1.0 AC.
0.7 AC.
0.3 AC.
0.7 AC.
75
0.6 AC.
65
42
23
0.3 AC.
0.3 AC.
311
58
CB
43
0.4 AC.
32
24
1.21 AC.
320
0.37 AC.
310
LINE A
33
L=210'
0.60 AC.
81
0.2 AC.
350
340
76
82
0.5 AC.
67
3.60 AC.
83
L=875'
L=560'
SITE
SOIL TYPE "D"
SOIL TYPE "A"
SOIL TYPE "A"
SOIL TYPE "D"
SOIL TYPE "D"
SOIL TYPE "D

SEE SHEET 1

N.A.P.

BLDG 1

BLDG 2

BLDG 3

BLDG 4

BLDG 5

BASIN "A" 4.66 AC.

BASIN "B" 2.53 AC.

NODES 10-84
AREA=100.1 AC.
TC100=14.9 MIN.
Q100=200.7 CFS

AREA=157.2 AC.
TC100=15.5 MIN.
R.M. Q100=279.8 CFS
Q100(OUT)=272.2 CFS

AREA=196.6 AC.
TC100=15.6 MIN.
R.M. Q100=380.7 CFS
Q100(OUT)=290.7 CFS

AREA=196.6 AC.
TC100=15.7 MIN.
R.M. Q100=490.7 CFS
Q100(OUT)=400.7 CFS

AREA=6.2 AC.
TC100=14.7 MIN.
Q100=13.3 CFS

AREA=10.0 AC.
TC100=10.7 MIN.
Q100=25.7 CFS

AREA=18.6 AC.
TC100=13.5 MIN.
Q100=41.3 CFS

W.Q. BASIN "A" (NODES 300-353) -
Q100 (RAT. METHOD)=85.3 CFS
Q100 (DISCHARGE)=18.5 CFS
TRIBUTARY AREA=39.4 AC.
TC100=13.5 MIN.
877.0 BOTTOM

AREA=27.7 AC.
TC100=16.8 MIN.
Q100=46.5 CFS

AREA=33.2 AC.
TC100=16.3 MIN.
Q100=55.6 CFS

AREA=57.1 AC.
TC100=14.7 MIN.
R.M. Q100=107.0 CFS
Q100(OUT)=71.5 CFS

W.Q. BASIN "B" (NODES 230-236)
Q100 (RAT. METHOD)=53.1 CFS
Q100 (DISCHARGE)=15.9 CFS
TRIBUTARY AREA=23.9 AC.
TC100=14.0 MIN.
879.73 BOTTOM

NODES 400-402
Q100=6.9 CFS
Tc100=8.6 Min.
AREA=2.5 Ac.

SOIL TYPE "A"
SOIL TYPE "B"
SOIL TYPE "C"
SOIL TYPE "D"

EX. DIRT CHANNEL

UNION PACIFIC RAILROAD

CANAL STREET

AVALON STREET

28TH STREET

26TH STREET

25TH STREET

PROPOSED UNDERGROUND WATER QUALITY CHAMBERS

PROPOSED FORCE MAIN

PROP. DISCHARGE FROM FORCE MAIN

EX. 72" RCP S.D. PER R.C.F.C. & W.C.D. PROJECT No. 1-0-0155 DRAWING No. 1-590 BELLTOWN LINE D

EX. 78" RCP S.D. PER R.C.F.C. & W.C.D. PROJECT No. 1-0-0155 DRAWING No. 1-590 BELLTOWN LINE D

EX. 36" RCP S.D. PER R.C.F.C. & W.C.D. PROJECT No. 1-0-0155 DRAWING No. 1-590 BELLTOWN LINE D

PROP. PARKWAY CULVERT

PROP. PARKWAY CULVERT

SITE

VICINITY MAP
N.T.S.

LEGEND

- PROJECT BOUNDARY
- SUBAREA BOUNDARY
- SOIL TYPE BOUNDARY
- FLOW PATH
- 1.00 AC. SUBAREA AREA
- 100 NODE NUMBER
- FLOW ARROW

0 40 80 160 240

SCALE: 1"=80'

Last Update:6/28/23
O:\3300-3399\3384\3384HYD.dwg

CITY OF JURUPA VALLEY
PUBLIC WORKS DEPARTMENT

PROPOSED CONDITION HYDROLOGY MAP

RUBIDOUX COMMERCE PARK

26TH STREET AND AVALON STREET

PREPARED FOR:
PROFICIENCY RUBIDOUX, LLC
5020 CAMPUS DRIVE
NEWPORT BEACH, CA 92660
PHONE: (949) 296-7006

Thienes Engineering, Inc.
CIVIL ENGINEERING • LAND SURVEYING
14349 FIRESTONE BOULEVARD
LA MIRADA, CALIFORNIA 90638
PH.(714)521-4811 FAX(714)521-4173

Designed by / Date	Approved by / Date	
Checked by / Date		
Designed by / Date	Public Works Director	R.C.E. XXXXX
Checked by / Date	Sheet 2 of 2 Sheets	

3384/2 OF 2 SHEET