PRELIMINARY
HYDROLOGY AND DRAINAGE STUDY
FOR
DEVELOPMENT PLAN NO. 2020-2231
ADAMS STORAGE
AND
ALLIANCE PROPANE

PREPARED BY

RDS And Associates

Civil Engineering
Project Management
Construction Management

RICH SOLTYSIAK
RCE NO. 37233

JUNE 2, 2021

REGISTERED PROFESSIONAL ENGINEER
RICHARD D. SOLTYSIAK
No. 37233
EXP. 06-30-22
STATE OF CALIFORNIA

30519 Wailea Court **Temecula, California 92592** **(951) 691-7706**

I. BACKGROUND

The purpose of this preliminary hydrology study is to demonstrate that the proposed Adams Storage and Alliance Propane Facilities Development Plan No. 2020-2231 will not adversely impact existing off-site drainage facilities or adjacent properties.

Development plan 2020-2231 consists of Adams Storage on 5.53 net acres and Alliance Propane on 1.08 net acres over APN 909-060-044. The site is located along Adams Avenue approximately a quarter mile north of Elm Street in the City of Murrieta, California. The site is bordered by vacant property to the north, and Adams avenue to the west, a riparian riverine reserve adjacent to the future Larchmont Channel and the existing Elm Street General Industrial project to the south, and another riperian riverine reserve setback to existing Business Park to the east.

Existing Drainage

Currently a remnant of Yoder wash drains from north to south through the middle of the site from the southerly border of the existing Pony League Baseball complex at Fig Street to the proposed Larchmont Channel. Yoder Wash has been severed by the Pony League Baseball complex to the north and the Elm Street commercial project to the south. The upstream portion of Yoder Wash has been intercepted by existing drainage improvements at Guava Street.

An interim outlet for the Fig Street Storm Drain outlets onto a Rancho California Water District Well site facility to the east of the existing Pony League Baseball complex at Fig Street. This interim outlet drains to a Rancho California Water District basin that also serves a well site blow off.

Proposed Drainage

In the developed condition, the 1.08 acres of Alliance propane will drain easterly to the riparian riverine north of the proposed Larchmont Channel. In addition the westerly 2.62 acres of Adams Storage will also drain to this location. The 2.91 acre balance of Adams Storage will drain to the easterly riparian riverine setback.

Both Adams Storage and Alliance Propane propose to minimize developed condition runoff by incorporating pervious decomposed granite surfacing throughout. The exception being Murrieta Fire Department access required concrete paving and city required concrete surfacing at trash enclosures.

II. PURPOSE OF STUDY

This hydrology report is intended to support approvals of City of Murrieta Development Plan No. 2020-2231, CUP No. 2020-2032, and TPM 2020-2230.

III. METHODOLOGY

The hydrology report incorporates a CivilCADD/Civil Design Computer Program based on the Riverside County Flood Control and Water Conservation Rational Method Hydrology. This computer program requires input data for rainfall, soil type, type of development, and topographic data for the study area.

Rainfall Data: Standard intensity-duration curve data generated from Plate D-4.1 of the Riverside County Flood Control and Water Conservation Rational Hydrology Manual for the Murrieta area was used.

Soil Type Data: The soil type was obtained from the Hydrologic Soils Group Map within the Riverside County Flood Control and Water Conservation Rational Hydrology Manual. A copy of this map (Plate 1.52) is included within this report. The soil type obtained from the Hydrologic Soils Group Map was determined to be type BC.

Type of Development: The developed condition for both Adams Storage and Alliance Propane proposes to minimize developed condition runoff by incorporating pervious decomposed granite surfacing throughout. The exception being Murrieta Fire Department access required concrete paving and city required concrete surfacing at trash enclosures.

Topographic Data: The Hydrology Map, Exhibit defines the subareas and contains information used as the basis of generating the project hydrology study.

IV. SUMMARY OF RESULTS

The following presents the results of the 10 and 100-yr 1-hr frequency storms analyzed utilizing Rational Method Hydrology for Adams Storage, Alliance Propane, and offsite flows conveyed .

Storm Event	Adams Storage DMA 1 2.62 Acres	Adams Storage DMA 2 2.91 Acres	Alliance Propane DMA 3 1.08 Acres	Offsite 7.50 Acres
10-Year	1.6 cfs	1.0 cfs	0.8	10.6 cfs
100-Year	2.4 cfs	1.5 cfs	1.1 cfs	16.4 cfs

10 YEAR STORM

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2001 Version 6.4
Rational Hydrology Study Date: 06/02/21 File:Adams1010.out

********* Hydrology Study Control Information **********
Adams Storage and Alliance Propane
10-YR Rational Method Hydrology Study
English (in-lb) Units used in input data file

RDS Associates, Temecula, CA - S/N 936

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Murrieta,Tmc,Rnch CaNorco] area used.
10 year storm 10 minute intensity = 2.360(In/Hr)
10 year storm 60 minute intensity = 0.880(In/Hr)
100 year storm 10 minute intensity = 3.480(In/Hr)
100 year storm 60 minute intensity = 1.300(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.880(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****
Adams Storage DMA 1

Initial area flow distance = 340.000(Ft.)
Top (of initial area) elevation = 45.700(Ft.)
Bottom (of initial area) elevation = 44.000(Ft.)
Difference in elevation = 1.700(Ft.)
Slope = 0.00500 s(percent)= 0.50
TC = k(0.462)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.720 min.
Rainfall intensity = 1.981(In/Hr) for a 10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.310
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 0.00
Pervious area fraction = 0.760; Impervious fraction = 0.240
Initial subarea runoff = 1.609(CFS)
Total initial stream area = 2.620(Ac.)
Pervious area fraction = 0.760

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++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
Adams Storage DMA 2
_____________________________________________________________________________
Initial area flow distance =   460.000(Ft.)
Top (of initial area) elevation =    46.400(Ft.)
Bottom (of initial area) elevation =    44.100(Ft.)
Difference in elevation =     2.300(Ft.)
Slope =    0.00500  s(percent)=       0.50
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.641 min.
Rainfall intensity =      1.782(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.190
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =   0.00
Pervious area fraction =  0.900; Impervious fraction =  0.100
Initial subarea runoff =      0.985(CFS)
Total initial stream area =        2.910(Ac.)
Pervious area fraction = 0.900



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Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
Alliance Propane DMA 1
_____________________________________________________________________________
Initial area flow distance =   370.000(Ft.)
Top (of initial area) elevation =    45.900(Ft.)
Bottom (of initial area) elevation =    44.000(Ft.)
Difference in elevation =     1.900(Ft.)
Slope =    0.00514  s(percent)=       0.51
TC = k(0.450)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.740 min.
Rainfall intensity =      1.980(In/Hr) for a    10.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.360
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =   0.00
Pervious area fraction =  0.710; Impervious fraction =  0.290
Initial subarea runoff =      0.770(CFS)
Total initial stream area =        1.080(Ac.)
Pervious area fraction = 0.710
End of computations, total study area =            6.61 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.813
Area averaged RI index number =   0.0
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100 YEAR STORM

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2001 Version 6.4
Rational Hydrology Study Date: 06/02/21 File:adams10100.out

********* Hydrology Study Control Information **********
Adams Storage and Alliance Propane
100-YR Rational Method Hydrology Study
English (in-lb) Units used in input data file

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

English (in-lb) Units used in input data file

RDS Associates, Temecula, CA - S/N 936

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 3

Standard intensity-duration curves data (Plate D-4.1)
For the [Murrieta,Tmc,Rnch CaNorco] area used.
10 year storm 10 minute intensity = 2.360(In/Hr)
10 year storm 60 minute intensity = 0.880(In/Hr)
100 year storm 10 minute intensity = 3.480(In/Hr)
100 year storm 60 minute intensity = 1.300(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.300(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****
Adams Storage DMA 1

Initial area flow distance = 340.000(Ft.)
Top (of initial area) elevation = 45.700(Ft.)
Bottom (of initial area) elevation = 44.000(Ft.)
Difference in elevation = 1.700(Ft.)
Slope = 0.00500 s(percent)= 0.50
TC = k(0.462)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 13.720 min.
Rainfall intensity = 2.927(In/Hr) for a 100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.310
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3) = 0.00
Pervious area fraction = 0.760; Impervious fraction = 0.240
Initial subarea runoff = 2.377(CFS)

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Total initial stream area =        2.620(Ac.)
Pervious area fraction = 0.760


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Process from Point/Station      200.000 to Point/Station      201.000
**** INITIAL AREA EVALUATION ****
Adams Storage DMA 2
________________________________________________________________________
Initial area flow distance =   460.000(Ft.)
Top (of initial area) elevation =    46.400(Ft.)
Bottom (of initial area) elevation =    44.100(Ft.)
Difference in elevation =     2.300(Ft.)
Slope =    0.00500  s(percent)=       0.50
TC = k(0.496)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   16.641 min.
Rainfall intensity =      2.632(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.190
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =   0.00
Pervious area fraction =  0.900; Impervious fraction =  0.100
Initial subarea runoff =      1.455(CFS)
Total initial stream area =        2.910(Ac.)
Pervious area fraction = 0.900


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Process from Point/Station      300.000 to Point/Station      301.000
**** INITIAL AREA EVALUATION ****
Alliance Propane DMA 1
________________________________________________________________________
Initial area flow distance =   370.000(Ft.)
Top (of initial area) elevation =    45.900(Ft.)
Bottom (of initial area) elevation =    44.000(Ft.)
Difference in elevation =     1.900(Ft.)
Slope =    0.00514  s(percent)=       0.51
TC = k(0.450)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.740 min.
Rainfall intensity =      2.924(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.360
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 3)  =   0.00
Pervious area fraction =  0.710; Impervious fraction =  0.290
Initial subarea runoff =      1.137(CFS)
Total initial stream area =        1.080(Ac.)
Pervious area fraction = 0.710
End of computations, total study area =            6.61 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.813
Area averaged RI index number =   0.0
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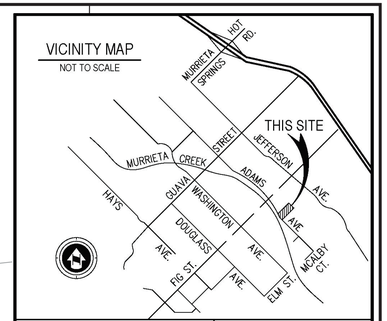
ADAMS AVENUE STORAGE AND ALLIANCE PROPANE FACILITIES

DRAINAGE STUDY

VICINITY MAP
NOT TO SCALE



PORTION OF SECTION 27, T.7S, R.3W | THOMAS BROS. PAGE 958, GRID D2

INDUSTRIAL

EXISTING SEWER LINE IN ADAMS AVENUE

WATER: RANCHO CALIFORNIA WATER DISTRICT (RCWD)
SEWER: EASTERN MUNICIPAL WATER DISTRICT (EMWD)
GAS: THE GAS COMPANY
ELECTRIC: SOUTHERN CALIFORNIA EDISON (SCE)
TELEPHONE: VERIZON
CABLE: VERIZON

MURRIETA VALLEY UNIFIED SCHOOL DISTRICT

RS 144 / 82-83
O.R. 2002-621863 REC. 10/31/2002

(Old Adams Ave.)
EX ADAMS AVE CL
FUTURE R/W
ADAMS AVE.
FUTURE R/W
PROPOSED CURB & GUTTER
PROPOSED SIDEWALK
(Existing Lane Stripe & CL Ex. Pavement)
100
PROPOSED WALL ON PL
1041.84 EX
1041.52 EX
Landscape
1041.23 EX
1041.28 EX
45.8 FS
41.2 INV
1041.36 EX
1041.67 EX
1042.27 EX
1042.98 EX
1042.41 EX
1044.38 EX
200
PROPOSED WALL ON PL
43.12 TC
Landscape
45.7 FS
44.9 FS
45.0 FS
45.2 FS
Landscape
46.4 FS
LS
1045
1
DMA 1
2.62 AC
PARCEL 2 RV STORAGE
5.56 Acres Gross
5.56 Acres Net
1046
PROPOSED WALL
SEWER DUMP STATION
43.40 TC HP
Landscape
12'
44'
43.19 TC
ECR
45.6 FS
43.08 FS
ADAMS STORAGE
(0.813 Acres)
2
EXISTING CULVERT
CONCRETE FIRE ACCESS WITH HAMMERHEAD
PROPOSED RETAINING WALL
PROPOSED RETAINING WALL
ACCESS EASEMENT
PROPOSED COMMERCIAL DRIVEWAY ENTRANCE PER CITY OF MURRIETA STD. NO. 310a
42.78 TC
BCR
45.6
PROPERTY LINE
ALLIANCE PROPANE
PARCEL 1 PROPANE
1.15 Acres Gross
1.08 Acres Net
42.0 FS
1040.49 EX
301
PROPERTY
Q10=0.8CFS
Q100=1.1 CFS
Landscape
44.9 FS
40.5 INV
Q10=1.6 CFS
Q100=2.4 CFS
101
PROPOSED RETAINING WALL
1040.60 EX
44.1 FS
DMA 2
2.91 AC
1045
ADAMS AVE
95'
1045
10' x 65' TANK
10' x 65' TANK
10' x 65' TANK
10' x 65' TANK
10' x 65' TANK
75'
300
(0.206 Acres)
ADAMS STORAGE BMP 1
6' X 352'
BIOFILTRATION BASIN
Landscape
ALLIANCE PROPANE BMP 1
8' x 108'
BIOFILTRATION BASIN
1040.38 EX
1040.48 EX
OPEN SPACE DRAINAGE EASEMENT
3.17 Acres
ADAMS STORAGE BMP 2
8' X 175'
BIOFILTRATION BASIN
Landscape
44.4 FS
Landscape
44.1 FS
1040.59 EX
44.3 FS
1040.97 EX
45.7 FS
LS
PROPOSED RETAINING WALL
1042.68 EX
OPEN SPACE DRAINAGE EASEMENT
42.15 TC
ECR
42.05 FS
45.9
1040.73 EX
PROPOSED RETAINING WALL
DMA 3
1.08 AC
41.75 TC
CURB
1040.70 EX
PROPOSED COMMERCIAL DRIVEWAY ENTRANCE PER CITY OF MURRIETA STD. NO. 310c
Landscape
1041.56 EX
1040.72 EX
Q10=1.0 CFS
Q100=1.5 CFS
201
1042.46 EX
1041.00 EX
1040.71 EX
1040.82 EX
1042.09 EX
1042.61 EX
1042.94 EX
1043.00 EX
1043.26 EX
1 CLASS 2 PERMEABLE BASE.
2 P.C.C. FIRE TRUCK ACCESS.

PERIMETER WALL
UNGROUTED MASONRY BLOCK @ 16" ON CENTER FOR DRAINAGE OUTLET
8' Top Width
2' (Depth x Side Slope)
4'
2' (Depth x Side Slope)
4:1
3"
3"
Cleanout
PONDING DEPTH
6" Subdrain
2 ngineered Soil Media
p ect. 3.8 of Riverside Co
S a Margarita Watershed
L MP Design Handbook

BIOFILTRATION BASIN TRENCH DETAILS

FUTURE R/W
EX. ST. IMPROVEMENT PLANS FOR ADAMS AVENUE SHEET 5 OF 8 DWG. NO. 02-1089
R/W

PARCEL 9
PM 30188
PM 29218-19
PARCEL 1

LOT 84
TEMECULA LAND AND WATER CO.
MB 8 / 359 S.D.

50 0 25 50 100
SCALE: 1"= 50'

SEAL: REGISTERED PROFESSIONAL ENGINEER RICHARD D. SOLTYSIAK No. 37233 EXP. 06-30-22 CIVIL STATE OF CALIFORNIA

RDS And Associates
Civil Engineering
Project Management
Construction Management
rds11@dslextreme.com
(951) 691-7706
Rich Soltysiak

BENCH MARK
DESCRIPTON: COUNTY OF RIVERSIDE T-89-81
LOCATION: WASHINGTON AVE. AND BROWN ST. N/W CORNER OF WASHINGTON ST, BRIDGE OVER MURRIETA BRIDGE ABUTMENT
RECORDED:
ELEVATION: 1069.40 DATUM: NAVD88

SCALE
HORIZONTAL
1" = 50'
VERTICAL

DATE	INITIAL	REVISION DESCRIPTION	SHT. NO.	DATE	INITIAL

ENGINEER OF WORK | CITY APPROVAL

SHEET 1 | CITY OF MURRIETA ENGINEERING DEPARTMENT | OF SHEET 1

DRAINAGE STUDY
C.O.M. No. 2020-2231
ADAMS AVENUE STORAGE AND ALLIANCE PROPANE FACILITIES

DWG: ADAMS10 DP-PGP.dwg SHEET:PGP DATE: Feb 19, 2021 - 11:59:11am

10 YEAR STORM

OFFSITE

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2001 Version 6.4
Rational Hydrology Study
Date: 12/16/16 File:Adams1010yr.out

Adams 10
Mass Grading
10-Yr Hydrology
Offsite

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

English (in-lb) Units used in input data file

RDS Associates, Temecula, CA - S/N 936

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Murrieta,Tmc,Rnch CaNorco] area used.
10 year storm 10 minute intensity = 2.360(In/Hr)
10 year storm 60 minute intensity = 0.880(In/Hr)
100 year storm 10 minute intensity = 3.480(In/Hr)
100 year storm 60 minute intensity = 1.300(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.880(In/Hr)
Slope of intensity duration curve = 0.5500

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Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 400.000(Ft.)
Top (of initial area) elevation = 43.800(Ft.)
Bottom (of initial area) elevation = 41.200(Ft.)
Difference in elevation = 2.600(Ft.)
Slope = 0.00650 s(percent)= 0.65
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.941 min.
Rainfall intensity = 1.824(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.776
Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 82.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 10.611(CFS)
Total initial stream area = 7.500(Ac.)
Pervious area fraction = 1.000

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number = 82.0

100 YEAR STORM

OFFSITE

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2001 Version 6.4
Rational Hydrology Study
Date: 12/16/16 File:adams10100yr.out

Adams 10
Mass Grading
100-Yr Hydrology
Offsite

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

English (in-lb) Units used in input data file

RDS Associates, Temecula, CA - S/N 936

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)
For the [Murrieta,Tmc,Rnch CaNorco] area used.
10 year storm 10 minute intensity = 2.360(In/Hr)
10 year storm 60 minute intensity = 0.880(In/Hr)
100 year storm 10 minute intensity = 3.480(In/Hr)
100 year storm 60 minute intensity = 1.300(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.300(In/Hr)
Slope of intensity duration curve = 0.5500

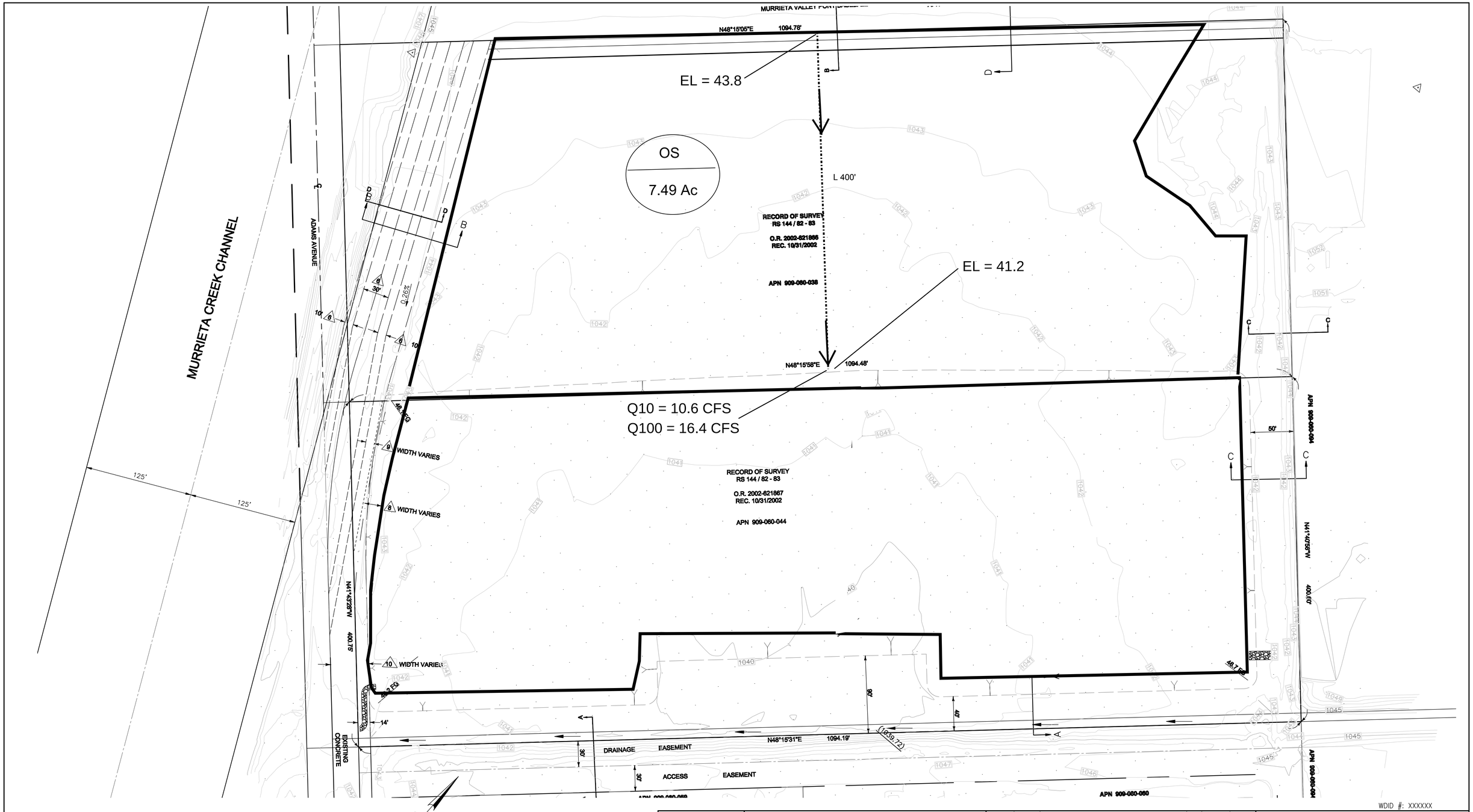
++

Process from Point/Station 100.000 to Point/Station 101.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 400.000(Ft.)
Top (of initial area) elevation = 43.800(Ft.)
Bottom (of initial area) elevation = 41.200(Ft.)
Difference in elevation = 2.600(Ft.)
Slope = 0.00650 s(percent)= 0.65
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 15.941 min.
Rainfall intensity = 2.695(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.812
Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.500
Decimal fraction soil group C = 0.500
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 82.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 16.408(CFS)
Total initial stream area = 7.500(Ac.)
Pervious area fraction = 1.000

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number = 82.0



WDID #: XXXXXX

GRAPHIC SCALE

50 0 25 50 100 150

1 inch = 50 ft.

SEAL: REGISTERED PROFESSIONAL ENGINEER RICHARD D. SOLTYSIAK No. 37233 EXP. 06-30-18 CIVIL STATE OF CALIFORNIA

RDS & ASSOCIATES

30519 Wailea Ct.
Temecula, CA. 92592
PH: 951.691.7706

Underground Service Alert
Call: TOLL FREE
1-800
422-4133
TWO WORKING DAYS BEFORE YOU DIG

BENCH MARK
DESCRIPTON: COUNTY OF RIVERSIDE T-89-81
LOCATION: WASHINGTON AVE. AND BROWN ST. N/W CORNER OF WASHINGTON ST, BRIDGE OVER MURRIETA BRIDGE ABUTMENT
RECORDED:
ELEVATION: 1069.40 DATUM: NAVD88

APPROVED FOR SIGNATURE
WILLIAM G. BIXBY DATE
BUREAU VERITAS NORTH AMERICA, INC.
R.C.E. NO. 48819

SCALE	UNDER THE SUPERVISION OF :
HORIZONTAL	
SEE ABOVE	DATE
VERTICAL	RICHARD D. SOLTYSIAK
N.A.	RCE NO. 37233 EXP. 06/30/2018

DATE	INITIAL	REVISION DESCRIPTION	SHT. NO.	DATE	INITIAL
ENGINEER OF WORK				CITY APPROVAL	

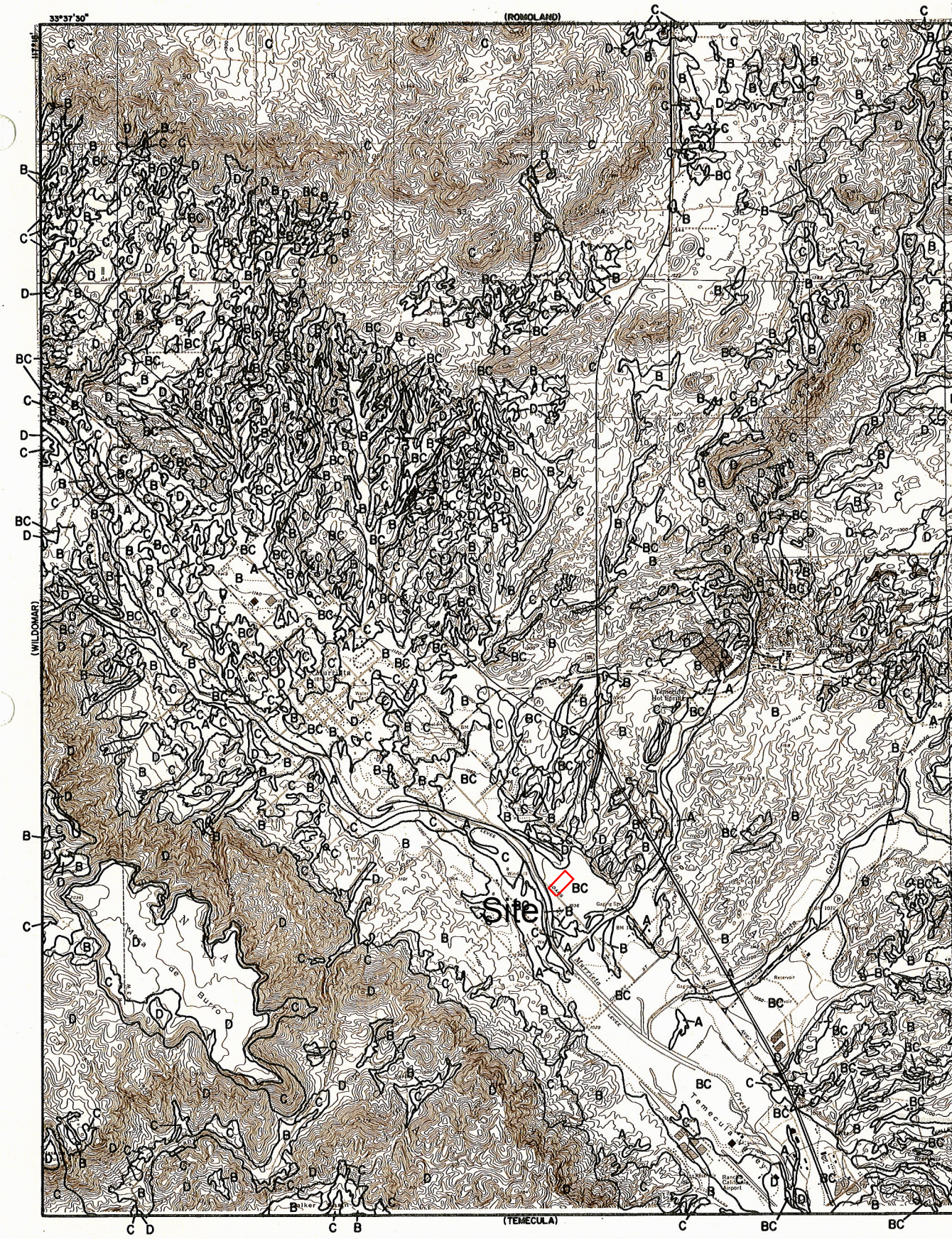
SHEET 1 — **CITY OF MURRIETA** ENGINEERING DEPARTMENT — OF SHEET 1

APPROVED
ROBERT K. MOEHLING DATE
CITY ENGINEER
CITY OF MURRIETA RCE 63056 EXP. DATE 6/30/18

DWN BY:
CHKD BY:
FIELD BK:

PROJECT NO. 00-0000

DRAWING NO.



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC&WCD

HYDROLOGY MANUAL

N

0 FEET 5000

HYDROLOGIC SOILS GROUP FOR MURRIETA

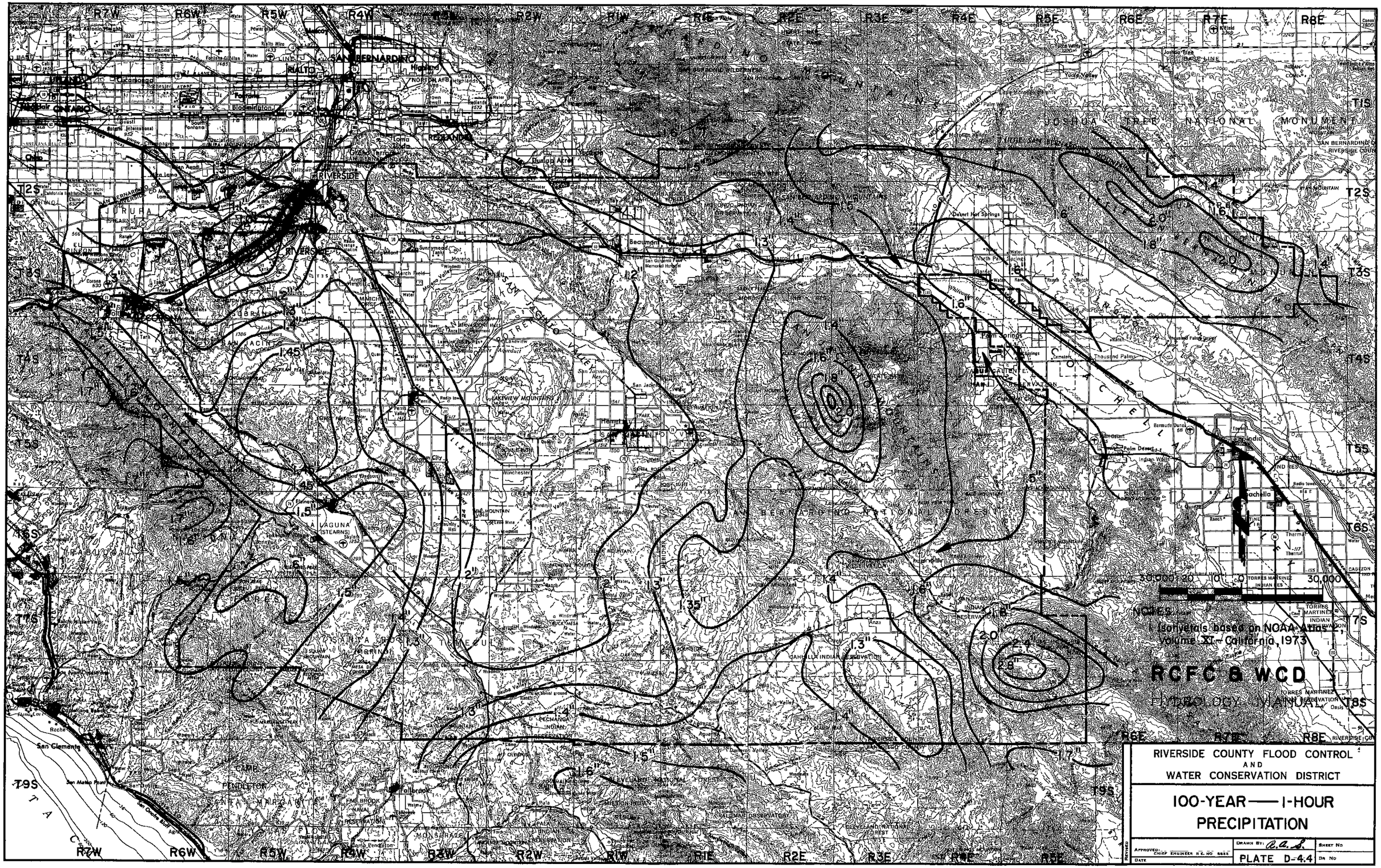
NOTES:
1. Isohyetals based on NOAA Atlas 2, Volume XI - California, 1973

RCFC & WCD
HYDROLOGY MANUAL

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

2-YEAR — 1-HOUR PRECIPITATION

DRAWN BY R.A.S.
APPROVED ____ CHIEF ENGINEER R.E. NO. 8882
DATE
SHEET NO
DR NO
PLATE D-4.3



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100-YEAR — 1-HOUR PRECIPITATION

APPROVED: CHIEF ENGINEER R.E. NO. 6855	DRAWN BY: A.A.L.	SHEET NO
DATE	PLATE D-4.4	DR NO

REVISED