APPENDIX F1
HYDROLOGY REPORT

Hydrology Report

for

LDW

TTM 38346

Located in the City of Menifee
County of Riverside
APN: 331-250-028, 029, 030

Prepared For:

FOREMOST COMPANIES

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June 13, 2022

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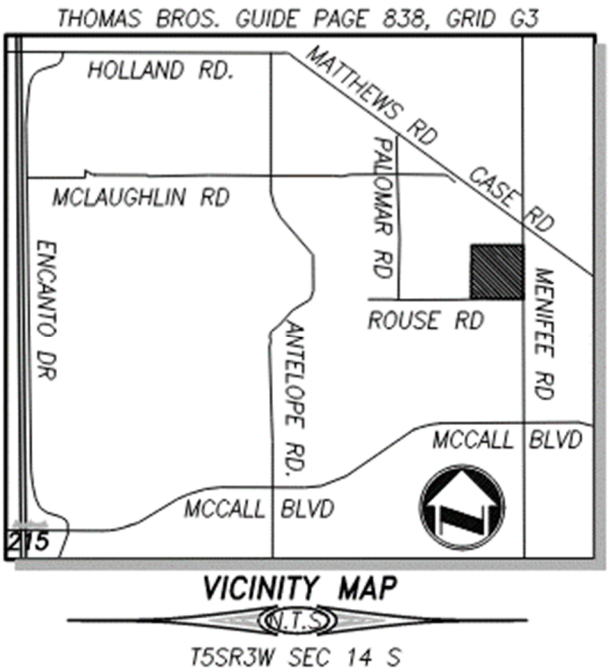
1. Purpose

The purpose of this study is to substantiate the hydrology design of LDW Menifee for the purposes of Entitlement Approval. Adkan Engineers has prepared this study to ensure that adequate size and proper operation of drainage facilities are incorporated into the Post-Development project site.

2. Project Description

LDW TTM 38346 is located in the City of Menifee at the North west corner of Rouse Road and Menifee Road. The planned development will consist of 31 Multi Family Residential Buildings containing a total of 162 units. Also proposed is a pool/spa and club house, all of which will be developed on 8 +/- acres. The site will treat the 2 year 24 hour storm event through the use of infiltration via perforated CMP underground storage chambers seated in a gravel bed layer. All other storm events (5, 10 & 100 year) will be controlled with orifices to outlet a max of 5.18 cfs, so as to not exceed available capacity of the downstream storm drain line. The onsite outlet storm drain line will connect to an existing 18" storm drain in Rouse Road (Lateral A-2A). Lateral A-2A conveys flows into an approved RCFC MDP drainage channel (Line A-2 per storm drain improvement plans for Tract 31098 – Project No: IP-006S). Since the proposed project site is tributary to a Master Drainage Facility, the site is not required to mitigate flows from the larger storm events, but only required to control the outflows.

A. Vicinity Map



3. Pre-Development Hydrology

The site is vacant land and there are no existing storm drain facilities on the site. Onsite runoff sheet flows west towards Palomar Road and continues west towards an open trapezoidal channel known as Line A-2, a Riverside County Flood Control Facility.

Drainage Area	
Q10 (cfs)	8.81
Q100 (cfs)	14.85
TC (min)	17.08
Acres	7.82

4. Post-Development Hydrology

Onsite flows are being directed from the north east corner of the project, towards the south west corner via a series of gutters throughout the project site. Surface flows in these proposed gutters will be captured via drop inlets and conveyed via an onsite storm drain system to an underground perforated CMP system located in the south west corner of the site. The CMP system will be installed in a gravel bedding to facilitate infiltration of the first flush flows from the project site. The perforated CMP's are sized to detain the 2, 5, 10, & 100 year storm volumes. The 2 year 24 hour storm event will be cleaned and mitigated via infiltration, all other storms will be detained and released through a orifices sized to outlet a max of 5.18 cfs. A hydraulic grade line analysis of the existing storm drain on Rouse Road (Lateral A-2A) was done to ensure adequate conveyance of the additional storm flow entering the storm drain line. Theses runoff flows ultimately drain into an existing open trapezoidal channel RCFC MDP drainage line known as Line A-2 on Palomar Road south of Rouse Road.

Drainage Area	
Q10 (cfs)	11.33
Q100 (cfs)	18.20
TC (min)	13.63
Acres	7.82

Storm Event	Existing		Proposed		Routed		
	cfs	volume ac.ft.	cfs	volume ac.ft.	cfs	volume ac.ft.	Depth (ft)
2yr1hr	4.625	0.0941	8.244	0.2619	0.000	0.2620	1.77
2yr3hr	1.197	0.0650	4.401	0.3965	0.000	0.3960	2.68
2yr6hr	0.571	0.0686	3.654	0.4952	0.000	0.4940	3.35
2yr24hr	0.176	0.1071	1.304	0.7923	0.123	0.7430	5.03
5yr1hr	7.357	0.1569	11.846	0.3678	0.000	0.3680	2.49
5yr3hr	2.814	0.1168	6.058	0.5192	0.000	0.5190	3.52
5yr6hr	1.824	0.1124	5.091	0.6713	0.000	0.6700	4.54
5yr24hr	0.238	0.1447	1.762	1.0706	1.231	0.7870	5.33
10yr1hr	11.312	0.3053	15.042	0.4651	0.000	0.4650	3.15
10yr3hr	5.642	0.2423	7.794	0.6308	0.000	0.6300	4.27
10yr6hr	4.711	0.2434	6.826	0.8235	1.286	0.7890	5.35
10yr24hr	0.285	0.1731	2.108	1.2812	1.591	0.8010	5.43
100yr1hr	19.45	0.6204	24.242	0.7741	0.700	0.7660	5.12
100yr3hr	9.85	0.5218	12.140	0.9730	3.477	0.8720	5.91
100yr6hr	8.931	0.5810	11.186	1.3176	5.181	1.0280	6.97
100yr24hr	1.807	0.4304	3.410	1.9865	3.041	0.8590	5.82

5. Method of Analysis

The site hydrology was based upon Riverside County Flood Control and Water Conversation District Hydrology Manual, from which pertinent soil and rainfall information was obtained.

Storm flows were determined by the "RATIONAL METHOD HYDROLOGY COMPUTER PROGRAM", Riverside County Flood Control & Water Conservation District 1978 Hydrology Manual, produced by Bondamin Engineering.

The site was also analyzed by the "SYNTHETIC UNIT HYDROLOGY METHOD COMPUTER PROGRAM", Riverside County Flood Control & Water Conservation District 1978 Hydrology Manual, produced by Bondamin Engineering.

6. Conclusion

The hydrologic calculations provided herein substantiate the design of the Post-Development project and indicate the following:

- The Post-Development facilities demonstrate the ability to convey the 100 year storm events

Therefore, it is our conclusion this project **does not** negatively impact the local community or watershed goals.

Section 1

Pre-Development 10 & 100 year Hydrology Offsite & Onsite (Rational Method)

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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 12/23/21  File:EX10.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

------------------------------------------------------------------------
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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.829(In/Hr)
Slope of intensity duration curve = 0.5000




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Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   609.000(Ft.)
Top (of initial area) elevation =  1468.500(Ft.)
Bottom (of initial area) elevation =  1462.000(Ft.)
Difference in elevation =     6.500(Ft.)
Slope =    0.01067  s(percent)=       1.07
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.079 min.
Rainfall intensity =      1.554(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.725
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  78.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      8.806(CFS)
Total initial stream area =        7.820(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            7.82 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  78.0
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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 12/23/21  File:EX100.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

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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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

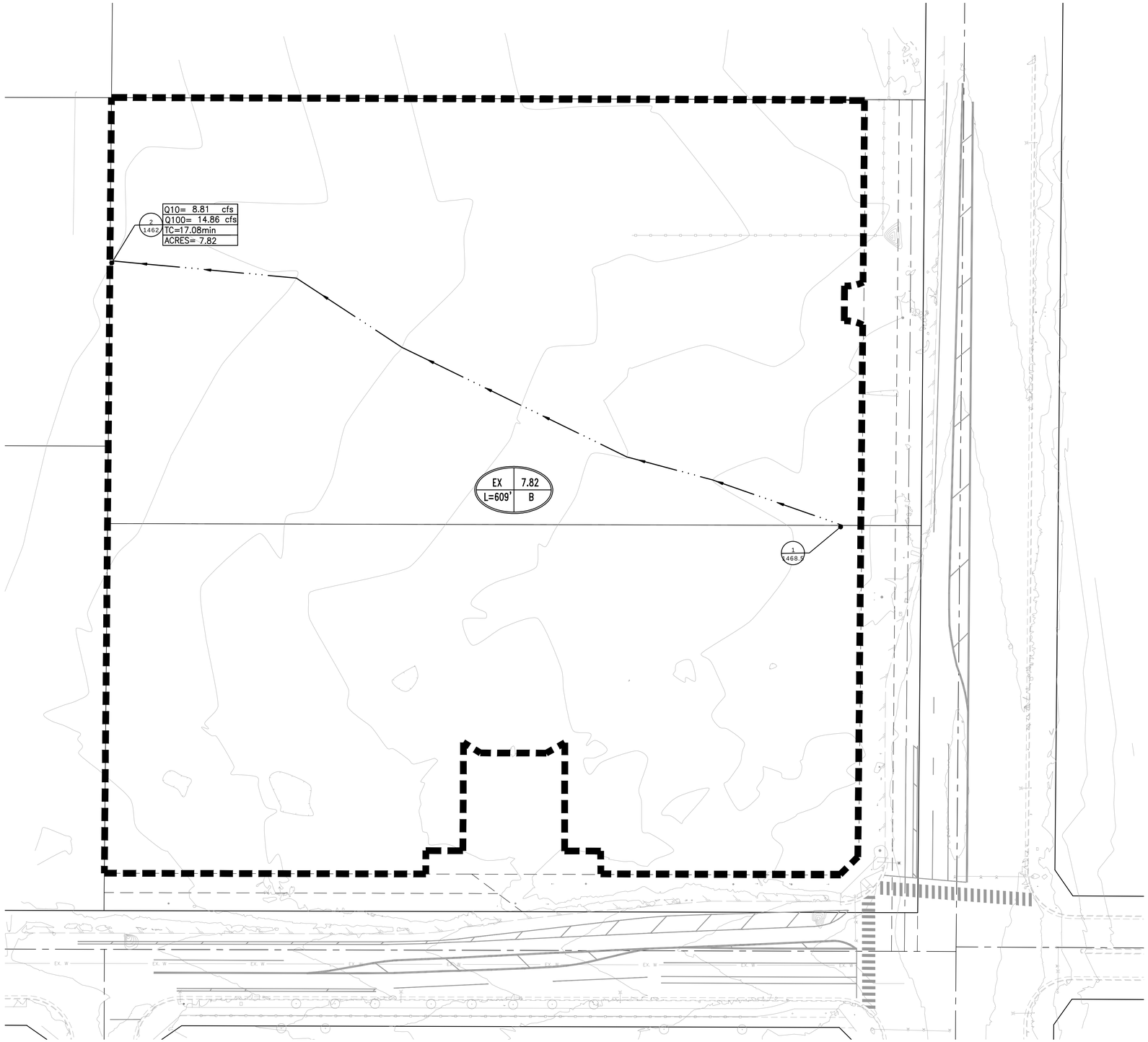
Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.300(In/Hr)
Slope of intensity duration curve = 0.5000




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Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   609.000(Ft.)
Top (of initial area) elevation =  1468.500(Ft.)
Bottom (of initial area) elevation =  1462.000(Ft.)
Difference in elevation =     6.500(Ft.)
Slope =    0.01067  s(percent)=       1.07
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   17.079 min.
Rainfall intensity =      2.437(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.780
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  78.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =     14.856(CFS)
Total initial stream area =         7.820(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            7.82 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 1.000
Area averaged RI index number =  78.0
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PRE-DEVELOPMENT RATIONAL HYDROLOGY MAP
TTM 38346



LEGEND

NODE ELEV | AREA ACRES | LENGTH SOIL

WATERSHED BOUNDARY

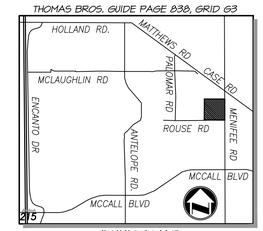
FLOW PATH

0 50 150

25 100 200

SCALE: 1" = 50'

THOMAS BROS. GUIDE PAGE 838, GRID G3



VICINITY MAP

T5SR3W SEC 14 S

PRE-DEVELOPMENT
RATIONAL HYDROLOGY MAP
TTM 38346

PREPARATION DATE : DECEMBER 2021

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Section 2

Post-Development 10 & 100 year Hydrology Offsite & Onsite (Rational Method)

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                Riverside County Rational Hydrology Program

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        Rational Hydrology Study        Date: 06/06/22  File:pro10.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

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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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.829(In/Hr)
Slope of intensity duration curve = 0.5000




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Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   865.000(Ft.)
Top (of initial area) elevation =  1469.290(Ft.)
Bottom (of initial area) elevation =  1464.500(Ft.)
Difference in elevation =     4.790(Ft.)
Slope =    0.00554  s(percent)=       0.55
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.657 min.
Rainfall intensity =      1.738(In/Hr) for a    10.0 year storm
APARTMENT subarea type
Runoff Coefficient = 0.832
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =     11.355(CFS)
Total initial stream area =        7.850(Ac.)
Pervious area fraction = 0.200


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Process from Point/Station        2.000 to Point/Station        3.000
**** SUBAREA FLOW ADDITION ****
____________________________________________________________________________
UNDEVELOPED (good cover) subarea
Runoff Coefficient = 0.604
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  61.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Time of concentration =    13.66 min.
Rainfall intensity =      1.738(In/Hr) for a    10.0 year storm
Subarea runoff =      0.189(CFS) for      0.180(Ac.)
Total runoff =     11.544(CFS)       Total area =       8.030(Ac.)
End of computations, total study area =            8.03 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.218
Area averaged RI index number =  56.1
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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 06/06/22  File:off10.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

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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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.829(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.000 to Point/Station        5.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   667.000(Ft.)
Top (of initial area) elevation =  1469.000(Ft.)
Bottom (of initial area) elevation =  1462.620(Ft.)
Difference in elevation =     6.380(Ft.)
Slope =    0.00957  s(percent)=       0.96
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.248 min.
Rainfall intensity =      2.006(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.869
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      1.500(CFS)
Total initial stream area =        0.860(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =            0.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  56.0
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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 06/06/22  File:off110.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

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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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.829(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.000 to Point/Station        6.000
**** INITIAL AREA EVALUATION ****
______________________________________________________________________________
Initial area flow distance =   678.000(Ft.)
Top (of initial area) elevation =  1469.000(Ft.)
Bottom (of initial area) elevation =  1468.000(Ft.)
Difference in elevation =     1.000(Ft.)
Slope =    0.00147  s(percent)=       0.15
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.992 min.
Rainfall intensity =      1.659(In/Hr) for a    10.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.865
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      1.593(CFS)
Total initial stream area =        1.110(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =            1.11 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  56.0
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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 06/06/22  File:pro100.out
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 *********   Hydrology Study Control Information **********

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

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Program License Serial Number 5006

------------------------------------------------------------------------
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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.300(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   865.000(Ft.)
Top (of initial area) elevation =  1469.290(Ft.)
Bottom (of initial area) elevation =  1464.500(Ft.)
Difference in elevation =     4.790(Ft.)
Slope =    0.00554  s(percent)=       0.55
TC = k(0.323)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   13.657 min.
Rainfall intensity =      2.725(In/Hr) for a   100.0 year storm
APARTMENT subarea type
Runoff Coefficient = 0.850
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.200; Impervious fraction =  0.800
Initial subarea runoff =     18.182(CFS)
Total initial stream area =        7.850(Ac.)
Pervious area fraction = 0.200


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Process from Point/Station        2.000 to Point/Station        3.000
**** SUBAREA FLOW ADDITION ****
____________________________________________________________________________
UNDEVELOPED (good cover) subarea
Runoff Coefficient = 0.686
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  61.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Time of concentration =    13.66 min.
Rainfall intensity =      2.725(In/Hr) for a   100.0 year storm
Subarea runoff =      0.336(CFS) for      0.180(Ac.)
Total runoff =     18.518(CFS)       Total area =       8.030(Ac.)
End of computations, total study area =            8.03 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.218
Area averaged RI index number =  56.1
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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 06/06/22  File:off100.out
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

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

------------------------------------------------------------------------


Program License Serial Number 5006

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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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.300(In/Hr)
Slope of intensity duration curve = 0.5000




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.000 to Point/Station        5.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =   667.000(Ft.)
Top (of initial area) elevation =  1469.000(Ft.)
Bottom (of initial area) elevation =  1462.620(Ft.)
Difference in elevation =     6.380(Ft.)
Slope =    0.00957  s(percent)=       0.96
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.248 min.
Rainfall intensity =      3.146(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.878
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.374(CFS)
Total initial stream area =        0.860(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =            0.86 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  56.0
```

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                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
        Rational Hydrology Study        Date: 06/06/22  File:off1100.out
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 *********   Hydrology Study Control Information **********

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

------------------------------------------------------------------------


Program License Serial Number 5006

------------------------------------------------------------------------
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

2 year, 1 hour precipitation =  0.500(In.)
100 year, 1 hour precipitation =  1.300(In.)

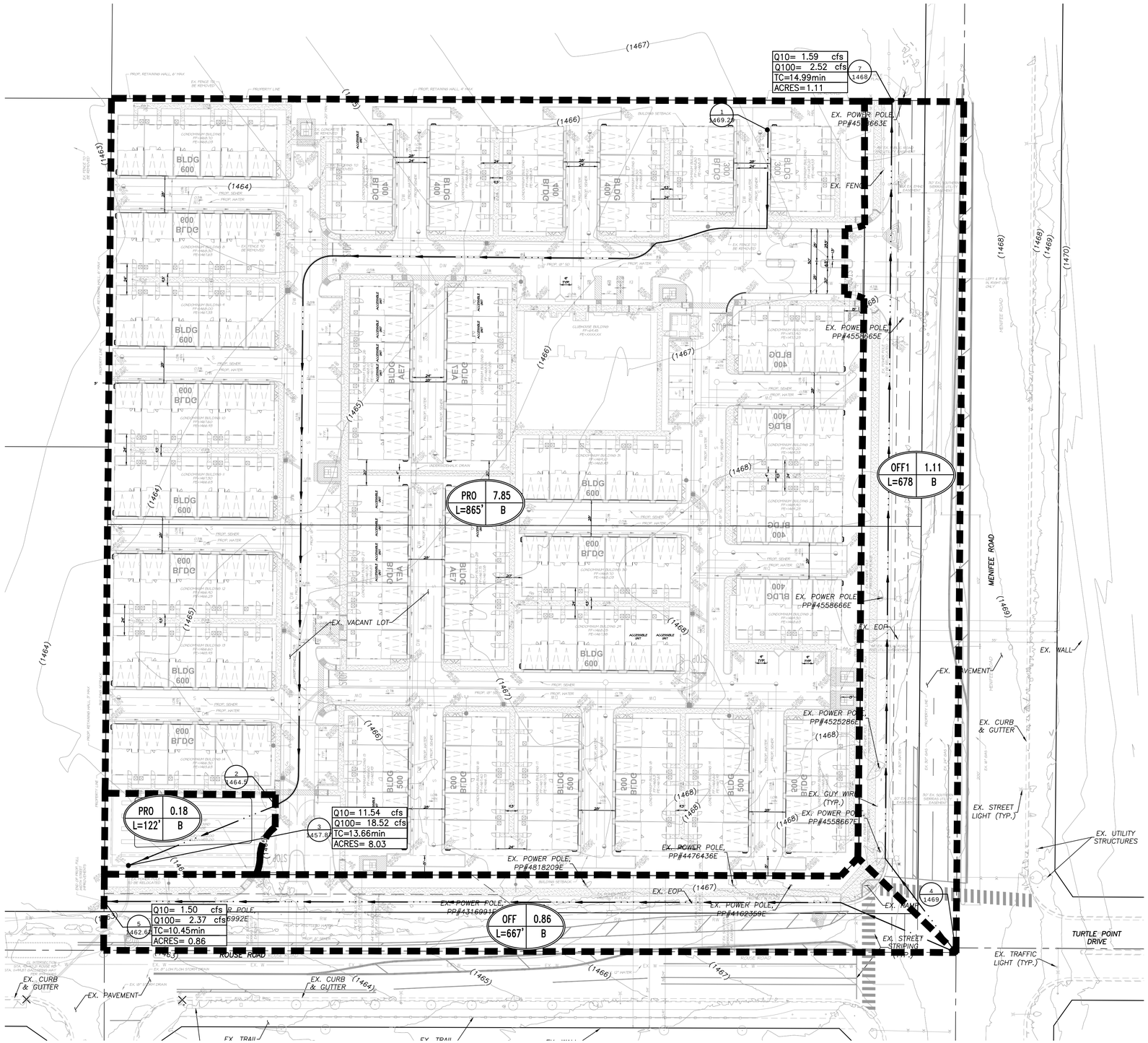
Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.300(In/Hr)
Slope of intensity duration curve = 0.5000

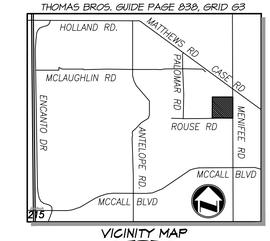



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        4.000 to Point/Station        6.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   678.000(Ft.)
Top (of initial area) elevation =  1469.000(Ft.)
Bottom (of initial area) elevation =  1468.000(Ft.)
Difference in elevation =     1.000(Ft.)
Slope =    0.00147  s(percent)=       0.15
TC = k(0.300)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   14.992 min.
Rainfall intensity =      2.601(In/Hr) for a   100.0 year storm
COMMERCIAL subarea type
Runoff Coefficient = 0.874
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 1.000
Decimal fraction soil group C = 0.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  56.00
Pervious area fraction =  0.100; Impervious fraction =  0.900
Initial subarea runoff =      2.523(CFS)
Total initial stream area =        1.110(Ac.)
Pervious area fraction = 0.100
End of computations, total study area =            1.11 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100
Area averaged RI index number =  56.0
```

POST-DEVELOPMENT RATIONAL HYDROLOGY MAP
TTM 38346





LEGEND

NODE ELEV | AREA ACRES | LENGTH SOIL

WATERSHED BOUNDARY

FLOW PATH

0 50 150
25 100 200
SCALE: 1" = 50

POST-DEVELOPMENT
RATIONAL HYDROLOGY MAP
TTM 38346

PREPARATION DATE : DECEMBER 2021
REVISION DATE : JUNE 2022

PLAN PREPARED BY:
adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 · Fax:(951) 688-0599

Section 3

Pre-Development Unit Hydrograph

```
        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  06/06/22 File: EX212.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.50                 4.01

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.30                10.44

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.500(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    0.500(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               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        167.177         37.089             3.002
          2   0.167        334.354         45.727             3.701
          3   0.250        501.531         10.276             0.832
          4   0.333        668.708          4.352             0.352
          5   0.417        835.884          2.557             0.207
                                    Sum = 100.000   Sum=       8.093
------------------------------------------------------------------------


 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     4.20      0.252       (  0.574)       0.227        0.025
   2   0.17     4.30      0.258       (  0.574)       0.232        0.026
   3   0.25     5.00      0.300       (  0.574)       0.270        0.030
   4   0.33     5.00      0.300       (  0.574)       0.270        0.030
   5   0.42     5.80      0.348       (  0.574)       0.313        0.035
   6   0.50     6.50      0.390       (  0.574)       0.351        0.039
   7   0.58     7.40      0.444       (  0.574)       0.400        0.044
   8   0.67     8.60      0.516       (  0.574)       0.464        0.052
   9   0.75    12.30      0.738          0.574    (  0.664)        0.164
  10   0.83    29.10      1.746          0.574    (  1.571)        1.172
  11   0.92     6.80      0.408       (  0.574)       0.367        0.041
  12   1.00     5.00      0.300       (  0.574)       0.270        0.030
                (Loss Rate Not Used)
     Sum =     100.0                                  Sum =     1.7
        Flood volume = Effective rainfall      0.14(In)
         times area       8.0(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
        Total soil loss =      0.36(In)
        Total soil loss =     0.240(Ac.Ft)
        Total rainfall =      0.50(In)
        Flood volume =        4099.0 Cubic Feet
        Total soil loss =       10474.4 Cubic Feet
        ------------------------------------------------------------------------
         Peak flow rate of this hydrograph =      4.625(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        2.5       5.0       7.5      10.0
  ------------------------------------------------------------------------
    0+ 5       0.0005      0.08  Q         |         |         |         |
    0+10       0.0017      0.17  Q         |         |         |         |
    0+15       0.0031      0.21  QV        |         |         |         |
    0+20       0.0047      0.23  Q V       |         |         |         |
    0+25       0.0065      0.25  |QV       |         |         |         |
    0+30       0.0084      0.29  |Q V      |         |         |         |
    0+35       0.0107      0.32  |Q  V     |         |         |         |
    0+40       0.0132      0.37  |Q   V    |         |         |         |
    0+45       0.0183      0.74  | Q    V  |         |         |         |
    0+50       0.0472      4.19  |         |     Q   V         |         |
    0+55       0.0791      4.63  |         |       Q |         |  V      |
    1+ 0       0.0879      1.28  |    Q    |         |         |      V  |
    1+ 5       0.0920      0.59  | Q       |         |         |        V|
    1+10       0.0939      0.28  |Q        |         |         |        V|
    1+15       0.0941      0.02  Q         |         |         |        V|
    1+20       0.0941      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  06/06/22 File: EX232.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    0.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.125	(0.574)	0.112	0.012
2	0.17	1.30	0.125	(0.574)	0.112	0.012
3	0.25	1.10	0.106	(0.574)	0.095	0.011
4	0.33	1.50	0.144	(0.574)	0.130	0.014
5	0.42	1.50	0.144	(0.574)	0.130	0.014
6	0.50	1.80	0.173	(0.574)	0.156	0.017
7	0.58	1.50	0.144	(0.574)	0.130	0.014
8	0.67	1.80	0.173	(0.574)	0.156	0.017
9	0.75	1.80	0.173	(0.574)	0.156	0.017
10	0.83	1.50	0.144	(0.574)	0.130	0.014
11	0.92	1.60	0.154	(0.574)	0.138	0.015
12	1.00	1.80	0.173	(0.574)	0.156	0.017
13	1.08	2.20	0.211	(0.574)	0.190	0.021
14	1.17	2.20	0.211	(0.574)	0.190	0.021
15	1.25	2.20	0.211	(0.574)	0.190	0.021
16	1.33	2.00	0.192	(0.574)	0.173	0.019
17	1.42	2.60	0.250	(0.574)	0.225	0.025
18	1.50	2.70	0.259	(0.574)	0.233	0.026
19	1.58	2.40	0.230	(0.574)	0.207	0.023
20	1.67	2.70	0.259	(0.574)	0.233	0.026
21	1.75	3.30	0.317	(0.574)	0.285	0.032
22	1.83	3.10	0.298	(0.574)	0.268	0.030
23	1.92	2.90	0.278	(0.574)	0.251	0.028
24	2.00	3.00	0.288	(0.574)	0.259	0.029
25	2.08	3.10	0.298	(0.574)	0.268	0.030
26	2.17	4.20	0.403	(0.574)	0.363	0.040
27	2.25	5.00	0.480	(0.574)	0.432	0.048
28	2.33	3.50	0.336	(0.574)	0.302	0.034
29	2.42	6.80	0.653	0.574	(0.587)	0.079
30	2.50	7.30	0.701	0.574	(0.631)	0.127
31	2.58	8.20	0.787	0.574	(0.708)	0.213
32	2.67	5.90	0.566	(0.574)	0.510	0.057
33	2.75	2.00	0.192	(0.574)	0.173	0.019
34	2.83	1.80	0.173	(0.574)	0.156	0.017
35	2.92	1.80	0.173	(0.574)	0.156	0.017
36	3.00	0.60	0.058	(0.574)	0.052	0.006
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	1.2

Flood volume = Effective rainfall 0.10(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.70(In)
Total soil loss = 0.470(Ac.Ft)
Total rainfall = 0.80(In)
Flood volume = 2829.2 Cubic Feet
Total soil loss = 20489.1 Cubic Feet

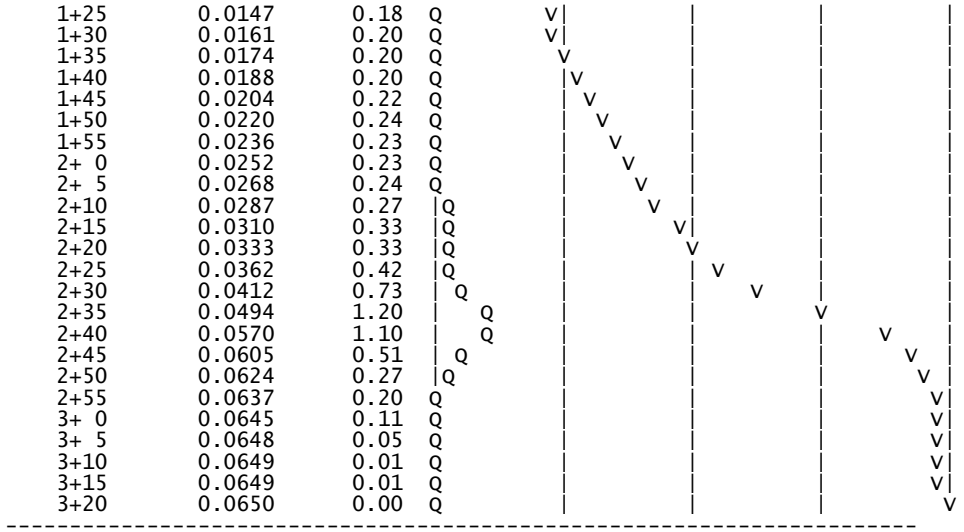
Peak flow rate of this hydrograph = 1.197(CFS)

++

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	2.5	5.0	7.5	10.0
0+ 5	0.0003	0.04	Q				
0+10	0.0008	0.08	Q				
0+15	0.0014	0.09	Q				
0+20	0.0021	0.10	QV				
0+25	0.0029	0.11	QV				
0+30	0.0037	0.12	Q V				
0+35	0.0046	0.13	Q V				
0+40	0.0055	0.13	Q V				
0+45	0.0064	0.14	Q V				
0+50	0.0073	0.13	Q V				
0+55	0.0082	0.12	Q V				
1+ 0	0.0091	0.13	Q V				
1+ 5	0.0101	0.15	Q V				
1+10	0.0112	0.16	Q V				
1+15	0.0124	0.17	Q V				
1+20	0.0135	0.16	Q V				


1+25 0.0147 0.18
1+30 0.0161 0.20
1+35 0.0174 0.20
1+40 0.0188 0.20
1+45 0.0204 0.22
1+50 0.0220 0.24
1+55 0.0236 0.23
2+ 0 0.0252 0.23
2+ 5 0.0268 0.24
2+10 0.0287 0.27
2+15 0.0310 0.33
2+20 0.0333 0.33
2+25 0.0362 0.42
2+30 0.0412 0.73
2+35 0.0494 1.20
2+40 0.0570 1.10
2+45 0.0605 0.51
2+50 0.0624 0.27
2+55 0.0637 0.20
3+ 0 0.0645 0.11
3+ 5 0.0648 0.05
3+10 0.0649 0.01
3+15 0.0649 0.01
3+20 0.0650 0.00

```
        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  06/06/22 File: EX262.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    1.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	0.060	(0.574)	0.054	0.006
2	0.17	0.60	0.072	(0.574)	0.065	0.007
3	0.25	0.60	0.072	(0.574)	0.065	0.007
4	0.33	0.60	0.072	(0.574)	0.065	0.007
5	0.42	0.60	0.072	(0.574)	0.065	0.007
6	0.50	0.70	0.084	(0.574)	0.076	0.008
7	0.58	0.70	0.084	(0.574)	0.076	0.008
8	0.67	0.70	0.084	(0.574)	0.076	0.008
9	0.75	0.70	0.084	(0.574)	0.076	0.008
10	0.83	0.70	0.084	(0.574)	0.076	0.008
11	0.92	0.70	0.084	(0.574)	0.076	0.008
12	1.00	0.80	0.096	(0.574)	0.086	0.010
13	1.08	0.80	0.096	(0.574)	0.086	0.010
14	1.17	0.80	0.096	(0.574)	0.086	0.010
15	1.25	0.80	0.096	(0.574)	0.086	0.010
16	1.33	0.80	0.096	(0.574)	0.086	0.010
17	1.42	0.80	0.096	(0.574)	0.086	0.010
18	1.50	0.80	0.096	(0.574)	0.086	0.010
19	1.58	0.80	0.096	(0.574)	0.086	0.010
20	1.67	0.80	0.096	(0.574)	0.086	0.010
21	1.75	0.80	0.096	(0.574)	0.086	0.010
22	1.83	0.80	0.096	(0.574)	0.086	0.010
23	1.92	0.80	0.096	(0.574)	0.086	0.010
24	2.00	0.90	0.108	(0.574)	0.097	0.011
25	2.08	0.80	0.096	(0.574)	0.086	0.010
26	2.17	0.90	0.108	(0.574)	0.097	0.011
27	2.25	0.90	0.108	(0.574)	0.097	0.011
28	2.33	0.90	0.108	(0.574)	0.097	0.011
29	2.42	0.90	0.108	(0.574)	0.097	0.011
30	2.50	0.90	0.108	(0.574)	0.097	0.011
31	2.58	0.90	0.108	(0.574)	0.097	0.011
32	2.67	0.90	0.108	(0.574)	0.097	0.011
33	2.75	1.00	0.120	(0.574)	0.108	0.012
34	2.83	1.00	0.120	(0.574)	0.108	0.012
35	2.92	1.00	0.120	(0.574)	0.108	0.012
36	3.00	1.00	0.120	(0.574)	0.108	0.012
37	3.08	1.00	0.120	(0.574)	0.108	0.012
38	3.17	1.10	0.132	(0.574)	0.119	0.013
39	3.25	1.10	0.132	(0.574)	0.119	0.013
40	3.33	1.10	0.132	(0.574)	0.119	0.013
41	3.42	1.20	0.144	(0.574)	0.130	0.014
42	3.50	1.30	0.156	(0.574)	0.140	0.016
43	3.58	1.40	0.168	(0.574)	0.151	0.017
44	3.67	1.40	0.168	(0.574)	0.151	0.017
45	3.75	1.50	0.180	(0.574)	0.162	0.018
46	3.83	1.50	0.180	(0.574)	0.162	0.018
47	3.92	1.60	0.192	(0.574)	0.173	0.019
48	4.00	1.60	0.192	(0.574)	0.173	0.019
49	4.08	1.70	0.204	(0.574)	0.184	0.020
50	4.17	1.80	0.216	(0.574)	0.194	0.022
51	4.25	1.90	0.228	(0.574)	0.205	0.023
52	4.33	2.00	0.240	(0.574)	0.216	0.024
53	4.42	2.10	0.252	(0.574)	0.227	0.025
54	4.50	2.10	0.252	(0.574)	0.227	0.025
55	4.58	2.20	0.264	(0.574)	0.238	0.026
56	4.67	2.30	0.276	(0.574)	0.248	0.028
57	4.75	2.40	0.288	(0.574)	0.259	0.029
58	4.83	2.40	0.288	(0.574)	0.259	0.029
59	4.92	2.50	0.300	(0.574)	0.270	0.030
60	5.00	2.60	0.312	(0.574)	0.281	0.031
61	5.08	3.10	0.372	(0.574)	0.335	0.037
62	5.17	3.60	0.432	(0.574)	0.389	0.043
63	5.25	3.90	0.468	(0.574)	0.421	0.047
64	5.33	4.20	0.504	(0.574)	0.454	0.050
65	5.42	4.70	0.564	(0.574)	0.508	0.056
66	5.50	5.60	0.672	0.574	(0.605)	0.098
67	5.58	1.90	0.228	(0.574)	0.205	0.023
68	5.67	0.90	0.108	(0.574)	0.097	0.011
69	5.75	0.60	0.072	(0.574)	0.065	0.007
70	5.83	0.50	0.060	(0.574)	0.054	0.006
71	5.92	0.30	0.036	(0.574)	0.032	0.004
72	6.00	0.20	0.024	(0.574)	0.022	0.002
		(Loss Rate Not Used)				

```
 Sum =     100.0                                    Sum =     1.2
    Flood volume = Effective rainfall      0.10(In)
     times area       8.0(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
    Total soil loss =      0.90(In)
    Total soil loss =     0.601(Ac.Ft)
    Total rainfall =      1.00(In)
    Flood volume =        2989.7 Cubic Feet
    Total soil loss =       26158.4 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      0.571(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        2.5       5.0       7.5      10.0
----------------------------------------------------------------------------
  0+ 5       0.0001      0.02  Q          |         |         |         |
  0+10       0.0004      0.04  Q          |         |         |         |
  0+15       0.0008      0.05  Q          |         |         |         |
  0+20       0.0012      0.06  Q          |         |         |         |
  0+25       0.0016      0.06  Q          |         |         |         |
  0+30       0.0020      0.06  QV         |         |         |         |
  0+35       0.0025      0.07  QV         |         |         |         |
  0+40       0.0029      0.07  QV         |         |         |         |
  0+45       0.0034      0.07  QV         |         |         |         |
  0+50       0.0039      0.07  Q V        |         |         |         |
  0+55       0.0043      0.07  Q V        |         |         |         |
  1+ 0       0.0048      0.07  Q V        |         |         |         |
  1+ 5       0.0053      0.08  Q  V       |         |         |         |
  1+10       0.0059      0.08  Q  V       |         |         |         |
  1+15       0.0064      0.08  Q  V       |         |         |         |
  1+20       0.0069      0.08  Q   V      |         |         |         |
  1+25       0.0075      0.08  Q   V      |         |         |         |
  1+30       0.0080      0.08  Q   V      |         |         |         |
  1+35       0.0086      0.08  Q   V      |         |         |         |
  1+40       0.0091      0.08  Q    V     |         |         |         |
  1+45       0.0096      0.08  Q    V     |         |         |         |
  1+50       0.0102      0.08  Q    V     |         |         |         |
  1+55       0.0107      0.08  Q     V    |         |         |         |
  2+ 0       0.0113      0.08  Q     V    |         |         |         |
  2+ 5       0.0118      0.08  Q     V    |         |         |         |
  2+10       0.0124      0.08  Q      V   |         |         |         |
  2+15       0.0130      0.09  Q      V   |         |         |         |
  2+20       0.0136      0.09  Q      V   |         |         |         |
  2+25       0.0142      0.09  Q       V  |         |         |         |
  2+30       0.0148      0.09  Q       V  |         |         |         |
  2+35       0.0154      0.09  Q       V  |         |         |         |
  2+40       0.0160      0.09  Q        V |         |         |         |
  2+45       0.0166      0.09  Q        V |         |         |         |
  2+50       0.0173      0.10  Q         V         |         |         |
  2+55       0.0179      0.10  Q         V         |         |         |
  3+ 0       0.0186      0.10  Q         V         |         |         |
  3+ 5       0.0193      0.10  Q         |V        |         |         |
  3+10       0.0200      0.10  Q         |V        |         |         |
  3+15       0.0207      0.11  Q         | V       |         |         |
  3+20       0.0214      0.11  Q         | V       |         |         |
  3+25       0.0222      0.11  Q         | V       |         |         |
  3+30       0.0230      0.12  Q         |  V      |         |         |
  3+35       0.0239      0.13  Q         |  V      |         |         |
  3+40       0.0248      0.13  Q         |   V     |         |         |
  3+45       0.0258      0.14  Q         |    V    |         |         |
  3+50       0.0267      0.14  Q         |    V    |         |         |
  3+55       0.0278      0.15  Q         |     V   |         |         |
  4+ 0       0.0288      0.15  Q         |     V   |         |         |
  4+ 5       0.0299      0.16  Q         |      V  |         |         |
  4+10       0.0311      0.17  Q         |       V |         |         |
  4+15       0.0323      0.18  Q         |       V |         |         |
  4+20       0.0336      0.19  Q         |        V|         |         |
  4+25       0.0349      0.20  Q         |         V         |         |
  4+30       0.0363      0.20  Q         |         |V        |         |
  4+35       0.0377      0.21  Q         |         |V        |         |
  4+40       0.0392      0.22  Q         |         | V       |         |
  4+45       0.0407      0.22  Q         |         |  V      |         |
  4+50       0.0423      0.23  Q         |         |   V     |         |
  4+55       0.0440      0.24  Q         |         |    V    |         |
  5+ 0       0.0456      0.24  Q         |         |     V   |         |
  5+ 5       0.0475      0.27  |Q        |         |      V  |         |
  5+10       0.0496      0.31  |Q        |         |       V |         |
  5+15       0.0520      0.35  |Q        |         |         V         |
  5+20       0.0546      0.38  |Q        |         |         |V        |
  5+25       0.0575      0.42  |Q        |         |         |  V      |
  5+30       0.0614      0.57  | Q       |         |         |   V     |
  5+35       0.0649      0.51  | Q       |         |         |      V  |
```

```
    5+40       0.0665      0.23  Q          |          |          |       V |
    5+45       0.0674      0.13  Q          |          |          |        V|
    5+50       0.0679      0.08  Q          |          |          |        V|
    5+55       0.0683      0.05  Q          |          |          |        V|
    6+ 0       0.0685      0.03  Q          |          |          |        V|
    6+ 5       0.0686      0.02  Q          |          |          |        V|
    6+10       0.0686      0.00  Q          |          |          |        V|
    6+15       0.0686      0.00  Q          |          |          |        V|
    6+20       0.0686      0.00  Q          |          |          |         V
--------------------------------------------------------------------------
```

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

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                Study date  06/06/22 File: EX2242.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    1.600(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.600(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089		3.002
2	0.167	334.354	45.727		3.701
3	0.250	501.531	10.276		0.832
4	0.333	668.708	4.352		0.352
5	0.417	835.884	2.557		0.207
			Sum = 100.000	Sum=	8.093

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	0.013	(1.017)	0.012	0.001
2	0.17	0.07	0.013	(1.014)	0.012	0.001
3	0.25	0.07	0.013	(1.010)	0.012	0.001
4	0.33	0.10	0.019	(1.006)	0.017	0.002
5	0.42	0.10	0.019	(1.002)	0.017	0.002
6	0.50	0.10	0.019	(0.998)	0.017	0.002
7	0.58	0.10	0.019	(0.994)	0.017	0.002
8	0.67	0.10	0.019	(0.990)	0.017	0.002
9	0.75	0.10	0.019	(0.986)	0.017	0.002
10	0.83	0.13	0.026	(0.982)	0.023	0.003
11	0.92	0.13	0.026	(0.978)	0.023	0.003
12	1.00	0.13	0.026	(0.975)	0.023	0.003
13	1.08	0.10	0.019	(0.971)	0.017	0.002
14	1.17	0.10	0.019	(0.967)	0.017	0.002
15	1.25	0.10	0.019	(0.963)	0.017	0.002
16	1.33	0.10	0.019	(0.959)	0.017	0.002
17	1.42	0.10	0.019	(0.955)	0.017	0.002
18	1.50	0.10	0.019	(0.952)	0.017	0.002
19	1.58	0.10	0.019	(0.948)	0.017	0.002
20	1.67	0.10	0.019	(0.944)	0.017	0.002
21	1.75	0.10	0.019	(0.940)	0.017	0.002
22	1.83	0.13	0.026	(0.936)	0.023	0.003
23	1.92	0.13	0.026	(0.933)	0.023	0.003
24	2.00	0.13	0.026	(0.929)	0.023	0.003
25	2.08	0.13	0.026	(0.925)	0.023	0.003
26	2.17	0.13	0.026	(0.921)	0.023	0.003
27	2.25	0.13	0.026	(0.918)	0.023	0.003
28	2.33	0.13	0.026	(0.914)	0.023	0.003
29	2.42	0.13	0.026	(0.910)	0.023	0.003
30	2.50	0.13	0.026	(0.906)	0.023	0.003
31	2.58	0.17	0.032	(0.903)	0.029	0.003
32	2.67	0.17	0.032	(0.899)	0.029	0.003
33	2.75	0.17	0.032	(0.895)	0.029	0.003
34	2.83	0.17	0.032	(0.892)	0.029	0.003
35	2.92	0.17	0.032	(0.888)	0.029	0.003
36	3.00	0.17	0.032	(0.884)	0.029	0.003
37	3.08	0.17	0.032	(0.881)	0.029	0.003
38	3.17	0.17	0.032	(0.877)	0.029	0.003
39	3.25	0.17	0.032	(0.873)	0.029	0.003
40	3.33	0.17	0.032	(0.870)	0.029	0.003
41	3.42	0.17	0.032	(0.866)	0.029	0.003
42	3.50	0.17	0.032	(0.862)	0.029	0.003
43	3.58	0.17	0.032	(0.859)	0.029	0.003
44	3.67	0.17	0.032	(0.855)	0.029	0.003
45	3.75	0.17	0.032	(0.852)	0.029	0.003
46	3.83	0.20	0.038	(0.848)	0.035	0.004
47	3.92	0.20	0.038	(0.844)	0.035	0.004
48	4.00	0.20	0.038	(0.841)	0.035	0.004
49	4.08	0.20	0.038	(0.837)	0.035	0.004
50	4.17	0.20	0.038	(0.834)	0.035	0.004
51	4.25	0.20	0.038	(0.830)	0.035	0.004
52	4.33	0.23	0.045	(0.827)	0.040	0.004
53	4.42	0.23	0.045	(0.823)	0.040	0.004
54	4.50	0.23	0.045	(0.820)	0.040	0.004
55	4.58	0.23	0.045	(0.816)	0.040	0.004
56	4.67	0.23	0.045	(0.813)	0.040	0.004
57	4.75	0.23	0.045	(0.809)	0.040	0.004
58	4.83	0.27	0.051	(0.806)	0.046	0.005
59	4.92	0.27	0.051	(0.802)	0.046	0.005
60	5.00	0.27	0.051	(0.799)	0.046	0.005
61	5.08	0.20	0.038	(0.795)	0.035	0.004
62	5.17	0.20	0.038	(0.792)	0.035	0.004
63	5.25	0.20	0.038	(0.788)	0.035	0.004
64	5.33	0.23	0.045	(0.785)	0.040	0.004
65	5.42	0.23	0.045	(0.781)	0.040	0.004
66	5.50	0.23	0.045	(0.778)	0.040	0.004
67	5.58	0.27	0.051	(0.775)	0.046	0.005
68	5.67	0.27	0.051	(0.771)	0.046	0.005
69	5.75	0.27	0.051	(0.768)	0.046	0.005
70	5.83	0.27	0.051	(0.764)	0.046	0.005
71	5.92	0.27	0.051	(0.761)	0.046	0.005
72	6.00	0.27	0.051	(0.758)	0.046	0.005
73	6.08	0.30	0.058	(0.754)	0.052	0.006

74	6.17	0.30	0.058	(0.751)	0.052	0.006
75	6.25	0.30	0.058	(0.748)	0.052	0.006
76	6.33	0.30	0.058	(0.744)	0.052	0.006
77	6.42	0.30	0.058	(0.741)	0.052	0.006
78	6.50	0.30	0.058	(0.738)	0.052	0.006
79	6.58	0.33	0.064	(0.734)	0.058	0.006
80	6.67	0.33	0.064	(0.731)	0.058	0.006
81	6.75	0.33	0.064	(0.728)	0.058	0.006
82	6.83	0.33	0.064	(0.724)	0.058	0.006
83	6.92	0.33	0.064	(0.721)	0.058	0.006
84	7.00	0.33	0.064	(0.718)	0.058	0.006
85	7.08	0.33	0.064	(0.715)	0.058	0.006
86	7.17	0.33	0.064	(0.711)	0.058	0.006
87	7.25	0.33	0.064	(0.708)	0.058	0.006
88	7.33	0.37	0.070	(0.705)	0.063	0.007
89	7.42	0.37	0.070	(0.702)	0.063	0.007
90	7.50	0.37	0.070	(0.698)	0.063	0.007
91	7.58	0.40	0.077	(0.695)	0.069	0.008
92	7.67	0.40	0.077	(0.692)	0.069	0.008
93	7.75	0.40	0.077	(0.689)	0.069	0.008
94	7.83	0.43	0.083	(0.686)	0.075	0.008
95	7.92	0.43	0.083	(0.682)	0.075	0.008
96	8.00	0.43	0.083	(0.679)	0.075	0.008
97	8.08	0.50	0.096	(0.676)	0.086	0.010
98	8.17	0.50	0.096	(0.673)	0.086	0.010
99	8.25	0.50	0.096	(0.670)	0.086	0.010
100	8.33	0.50	0.096	(0.667)	0.086	0.010
101	8.42	0.50	0.096	(0.664)	0.086	0.010
102	8.50	0.50	0.096	(0.660)	0.086	0.010
103	8.58	0.53	0.102	(0.657)	0.092	0.010
104	8.67	0.53	0.102	(0.654)	0.092	0.010
105	8.75	0.53	0.102	(0.651)	0.092	0.010
106	8.83	0.57	0.109	(0.648)	0.098	0.011
107	8.92	0.57	0.109	(0.645)	0.098	0.011
108	9.00	0.57	0.109	(0.642)	0.098	0.011
109	9.08	0.63	0.122	(0.639)	0.109	0.012
110	9.17	0.63	0.122	(0.636)	0.109	0.012
111	9.25	0.63	0.122	(0.633)	0.109	0.012
112	9.33	0.67	0.128	(0.630)	0.115	0.013
113	9.42	0.67	0.128	(0.627)	0.115	0.013
114	9.50	0.67	0.128	(0.624)	0.115	0.013
115	9.58	0.70	0.134	(0.621)	0.121	0.013
116	9.67	0.70	0.134	(0.618)	0.121	0.013
117	9.75	0.70	0.134	(0.615)	0.121	0.013
118	9.83	0.73	0.141	(0.612)	0.127	0.014
119	9.92	0.73	0.141	(0.609)	0.127	0.014
120	10.00	0.73	0.141	(0.606)	0.127	0.014
121	10.08	0.50	0.096	(0.603)	0.086	0.010
122	10.17	0.50	0.096	(0.600)	0.086	0.010
123	10.25	0.50	0.096	(0.597)	0.086	0.010
124	10.33	0.50	0.096	(0.594)	0.086	0.010
125	10.42	0.50	0.096	(0.592)	0.086	0.010
126	10.50	0.50	0.096	(0.589)	0.086	0.010
127	10.58	0.67	0.128	(0.586)	0.115	0.013
128	10.67	0.67	0.128	(0.583)	0.115	0.013
129	10.75	0.67	0.128	(0.580)	0.115	0.013
130	10.83	0.67	0.128	(0.577)	0.115	0.013
131	10.92	0.67	0.128	(0.574)	0.115	0.013
132	11.00	0.67	0.128	(0.572)	0.115	0.013
133	11.08	0.63	0.122	(0.569)	0.109	0.012
134	11.17	0.63	0.122	(0.566)	0.109	0.012
135	11.25	0.63	0.122	(0.563)	0.109	0.012
136	11.33	0.63	0.122	(0.560)	0.109	0.012
137	11.42	0.63	0.122	(0.558)	0.109	0.012
138	11.50	0.63	0.122	(0.555)	0.109	0.012
139	11.58	0.57	0.109	(0.552)	0.098	0.011
140	11.67	0.57	0.109	(0.549)	0.098	0.011
141	11.75	0.57	0.109	(0.547)	0.098	0.011
142	11.83	0.60	0.115	(0.544)	0.104	0.012
143	11.92	0.60	0.115	(0.541)	0.104	0.012
144	12.00	0.60	0.115	(0.538)	0.104	0.012
145	12.08	0.83	0.160	(0.536)	0.144	0.016
146	12.17	0.83	0.160	(0.533)	0.144	0.016
147	12.25	0.83	0.160	(0.530)	0.144	0.016
148	12.33	0.87	0.166	(0.528)	0.150	0.017
149	12.42	0.87	0.166	(0.525)	0.150	0.017
150	12.50	0.87	0.166	(0.522)	0.150	0.017
151	12.58	0.93	0.179	(0.520)	0.161	0.018
152	12.67	0.93	0.179	(0.517)	0.161	0.018
153	12.75	0.93	0.179	(0.515)	0.161	0.018
154	12.83	0.97	0.186	(0.512)	0.167	0.019
155	12.92	0.97	0.186	(0.509)	0.167	0.019
156	13.00	0.97	0.186	(0.507)	0.167	0.019
157	13.08	1.13	0.218	(0.504)	0.196	0.022
158	13.17	1.13	0.218	(0.502)	0.196	0.022
159	13.25	1.13	0.218	(0.499)	0.196	0.022
160	13.33	1.13	0.218	(0.497)	0.196	0.022

161	13.42	1.13	0.218	(0.494)	0.196	0.022
162	13.50	1.13	0.218	(0.492)	0.196	0.022
163	13.58	0.77	0.147	(0.489)	0.132	0.015
164	13.67	0.77	0.147	(0.487)	0.132	0.015
165	13.75	0.77	0.147	(0.484)	0.132	0.015
166	13.83	0.77	0.147	(0.482)	0.132	0.015
167	13.92	0.77	0.147	(0.479)	0.132	0.015
168	14.00	0.77	0.147	(0.477)	0.132	0.015
169	14.08	0.90	0.173	(0.474)	0.156	0.017
170	14.17	0.90	0.173	(0.472)	0.156	0.017
171	14.25	0.90	0.173	(0.469)	0.156	0.017
172	14.33	0.87	0.166	(0.467)	0.150	0.017
173	14.42	0.87	0.166	(0.465)	0.150	0.017
174	14.50	0.87	0.166	(0.462)	0.150	0.017
175	14.58	0.87	0.166	(0.460)	0.150	0.017
176	14.67	0.87	0.166	(0.458)	0.150	0.017
177	14.75	0.87	0.166	(0.455)	0.150	0.017
178	14.83	0.83	0.160	(0.453)	0.144	0.016
179	14.92	0.83	0.160	(0.451)	0.144	0.016
180	15.00	0.83	0.160	(0.448)	0.144	0.016
181	15.08	0.80	0.154	(0.446)	0.138	0.015
182	15.17	0.80	0.154	(0.444)	0.138	0.015
183	15.25	0.80	0.154	(0.441)	0.138	0.015
184	15.33	0.77	0.147	(0.439)	0.132	0.015
185	15.42	0.77	0.147	(0.437)	0.132	0.015
186	15.50	0.77	0.147	(0.435)	0.132	0.015
187	15.58	0.63	0.122	(0.432)	0.109	0.012
188	15.67	0.63	0.122	(0.430)	0.109	0.012
189	15.75	0.63	0.122	(0.428)	0.109	0.012
190	15.83	0.63	0.122	(0.426)	0.109	0.012
191	15.92	0.63	0.122	(0.424)	0.109	0.012
192	16.00	0.63	0.122	(0.421)	0.109	0.012
193	16.08	0.13	0.026	(0.419)	0.023	0.003
194	16.17	0.13	0.026	(0.417)	0.023	0.003
195	16.25	0.13	0.026	(0.415)	0.023	0.003
196	16.33	0.13	0.026	(0.413)	0.023	0.003
197	16.42	0.13	0.026	(0.411)	0.023	0.003
198	16.50	0.13	0.026	(0.409)	0.023	0.003
199	16.58	0.10	0.019	(0.407)	0.017	0.002
200	16.67	0.10	0.019	(0.405)	0.017	0.002
201	16.75	0.10	0.019	(0.403)	0.017	0.002
202	16.83	0.10	0.019	(0.401)	0.017	0.002
203	16.92	0.10	0.019	(0.398)	0.017	0.002
204	17.00	0.10	0.019	(0.396)	0.017	0.002
205	17.08	0.17	0.032	(0.394)	0.029	0.003
206	17.17	0.17	0.032	(0.392)	0.029	0.003
207	17.25	0.17	0.032	(0.390)	0.029	0.003
208	17.33	0.17	0.032	(0.389)	0.029	0.003
209	17.42	0.17	0.032	(0.387)	0.029	0.003
210	17.50	0.17	0.032	(0.385)	0.029	0.003
211	17.58	0.17	0.032	(0.383)	0.029	0.003
212	17.67	0.17	0.032	(0.381)	0.029	0.003
213	17.75	0.17	0.032	(0.379)	0.029	0.003
214	17.83	0.13	0.026	(0.377)	0.023	0.003
215	17.92	0.13	0.026	(0.375)	0.023	0.003
216	18.00	0.13	0.026	(0.373)	0.023	0.003
217	18.08	0.13	0.026	(0.371)	0.023	0.003
218	18.17	0.13	0.026	(0.370)	0.023	0.003
219	18.25	0.13	0.026	(0.368)	0.023	0.003
220	18.33	0.13	0.026	(0.366)	0.023	0.003
221	18.42	0.13	0.026	(0.364)	0.023	0.003
222	18.50	0.13	0.026	(0.363)	0.023	0.003
223	18.58	0.10	0.019	(0.361)	0.017	0.002
224	18.67	0.10	0.019	(0.359)	0.017	0.002
225	18.75	0.10	0.019	(0.357)	0.017	0.002
226	18.83	0.07	0.013	(0.356)	0.012	0.001
227	18.92	0.07	0.013	(0.354)	0.012	0.001
228	19.00	0.07	0.013	(0.352)	0.012	0.001
229	19.08	0.10	0.019	(0.351)	0.017	0.002
230	19.17	0.10	0.019	(0.349)	0.017	0.002
231	19.25	0.10	0.019	(0.347)	0.017	0.002
232	19.33	0.13	0.026	(0.346)	0.023	0.003
233	19.42	0.13	0.026	(0.344)	0.023	0.003
234	19.50	0.13	0.026	(0.342)	0.023	0.003
235	19.58	0.10	0.019	(0.341)	0.017	0.002
236	19.67	0.10	0.019	(0.339)	0.017	0.002
237	19.75	0.10	0.019	(0.338)	0.017	0.002
238	19.83	0.07	0.013	(0.336)	0.012	0.001
239	19.92	0.07	0.013	(0.335)	0.012	0.001
240	20.00	0.07	0.013	(0.333)	0.012	0.001
241	20.08	0.10	0.019	(0.332)	0.017	0.002
242	20.17	0.10	0.019	(0.330)	0.017	0.002
243	20.25	0.10	0.019	(0.329)	0.017	0.002
244	20.33	0.10	0.019	(0.328)	0.017	0.002
245	20.42	0.10	0.019	(0.326)	0.017	0.002
246	20.50	0.10	0.019	(0.325)	0.017	0.002
247	20.58	0.10	0.019	(0.323)	0.017	0.002

248	20.67	0.10	0.019	(0.322)	0.017	0.002
249	20.75	0.10	0.019	(0.321)	0.017	0.002
250	20.83	0.07	0.013	(0.319)	0.012	0.001
251	20.92	0.07	0.013	(0.318)	0.012	0.001
252	21.00	0.07	0.013	(0.317)	0.012	0.001
253	21.08	0.10	0.019	(0.316)	0.017	0.002
254	21.17	0.10	0.019	(0.314)	0.017	0.002
255	21.25	0.10	0.019	(0.313)	0.017	0.002
256	21.33	0.07	0.013	(0.312)	0.012	0.001
257	21.42	0.07	0.013	(0.311)	0.012	0.001
258	21.50	0.07	0.013	(0.310)	0.012	0.001
259	21.58	0.10	0.019	(0.308)	0.017	0.002
260	21.67	0.10	0.019	(0.307)	0.017	0.002
261	21.75	0.10	0.019	(0.306)	0.017	0.002
262	21.83	0.07	0.013	(0.305)	0.012	0.001
263	21.92	0.07	0.013	(0.304)	0.012	0.001
264	22.00	0.07	0.013	(0.303)	0.012	0.001
265	22.08	0.10	0.019	(0.302)	0.017	0.002
266	22.17	0.10	0.019	(0.301)	0.017	0.002
267	22.25	0.10	0.019	(0.300)	0.017	0.002
268	22.33	0.07	0.013	(0.299)	0.012	0.001
269	22.42	0.07	0.013	(0.298)	0.012	0.001
270	22.50	0.07	0.013	(0.297)	0.012	0.001
271	22.58	0.07	0.013	(0.297)	0.012	0.001
272	22.67	0.07	0.013	(0.296)	0.012	0.001
273	22.75	0.07	0.013	(0.295)	0.012	0.001
274	22.83	0.07	0.013	(0.294)	0.012	0.001
275	22.92	0.07	0.013	(0.293)	0.012	0.001
276	23.00	0.07	0.013	(0.293)	0.012	0.001
277	23.08	0.07	0.013	(0.292)	0.012	0.001
278	23.17	0.07	0.013	(0.291)	0.012	0.001
279	23.25	0.07	0.013	(0.291)	0.012	0.001
280	23.33	0.07	0.013	(0.290)	0.012	0.001
281	23.42	0.07	0.013	(0.290)	0.012	0.001
282	23.50	0.07	0.013	(0.289)	0.012	0.001
283	23.58	0.07	0.013	(0.289)	0.012	0.001
284	23.67	0.07	0.013	(0.288)	0.012	0.001
285	23.75	0.07	0.013	(0.288)	0.012	0.001
286	23.83	0.07	0.013	(0.287)	0.012	0.001
287	23.92	0.07	0.013	(0.287)	0.012	0.001
288	24.00	0.07	0.013	(0.287)	0.012	0.001
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	1.9

Flood volume = Effective rainfall 0.16(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 1.44(In)
Total soil loss = 0.964(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 4663.8 Cubic Feet
Total soil loss = 41973.8 Cubic Feet

Peak flow rate of this hydrograph = 0.176(CFS)

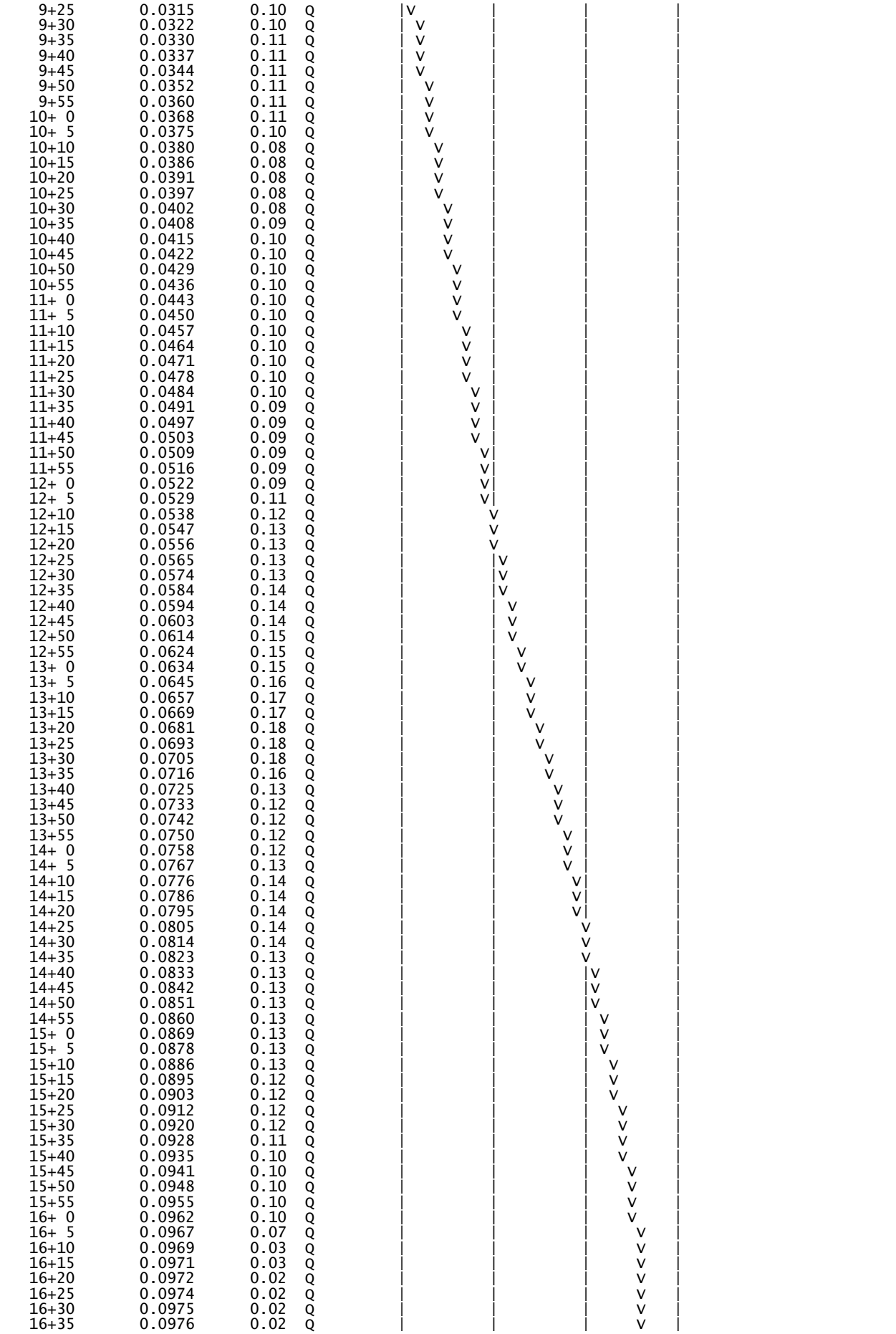
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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0000	0.00	Q	|	|	|	|
0+10	0.0001	0.01	Q	|	|	|	|
0+15	0.0002	0.01	Q	|	|	|	|
0+20	0.0002	0.01	Q	|	|	|	|
0+25	0.0003	0.01	Q	|	|	|	|
0+30	0.0004	0.02	Q	|	|	|	|
0+35	0.0005	0.02	Q	|	|	|	|
0+40	0.0007	0.02	Q	|	|	|	|
0+45	0.0008	0.02	Q	|	|	|	|
0+50	0.0009	0.02	Q	|	|	|	|
0+55	0.0010	0.02	Q	|	|	|	|
1+ 0	0.0012	0.02	Q	|	|	|	|
1+ 5	0.0013	0.02	Q	|	|	|	|
1+10	0.0014	0.02	Q	|	|	|	|
1+15	0.0015	0.02	Q	|	|	|	|
1+20	0.0016	0.02	Q	|	|	|	|
1+25	0.0017	0.02	Q	|	|	|	|
1+30	0.0018	0.02	Q	|	|	|	|
1+35	0.0019	0.02	Q	|	|	|	|
1+40	0.0020	0.02	Q	|	|	|	|
1+45	0.0022	0.02	Q	|	|	|	|
1+50	0.0023	0.02	Q	|	|	|	|
1+55	0.0024	0.02	Q	|	|	|	|
2+ 0	0.0025	0.02	Q	|	|	|	|
2+ 5	0.0027	0.02	QV	|	|	|	|

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2+10       0.0028      0.02  QV        |         |         |         |
2+15       0.0030      0.02  QV        |         |         |         |
2+20       0.0031      0.02  QV        |         |         |         |
2+25       0.0033      0.02  QV        |         |         |         |
2+30       0.0034      0.02  QV        |         |         |         |
2+35       0.0036      0.02  QV        |         |         |         |
2+40       0.0037      0.03  QV        |         |         |         |
2+45       0.0039      0.03  QV        |         |         |         |
2+50       0.0041      0.03  QV        |         |         |         |
2+55       0.0043      0.03  QV        |         |         |         |
3+ 0       0.0044      0.03  QV        |         |         |         |
3+ 5       0.0046      0.03  QV        |         |         |         |
3+10       0.0048      0.03  QV        |         |         |         |
3+15       0.0050      0.03  QV        |         |         |         |
3+20       0.0052      0.03  QV        |         |         |         |
3+25       0.0053      0.03  QV        |         |         |         |
3+30       0.0055      0.03  Q V       |         |         |         |
3+35       0.0057      0.03  Q V       |         |         |         |
3+40       0.0059      0.03  Q V       |         |         |         |
3+45       0.0060      0.03  Q V       |         |         |         |
3+50       0.0062      0.03  Q V       |         |         |         |
3+55       0.0064      0.03  Q V       |         |         |         |
4+ 0       0.0067      0.03  Q V       |         |         |         |
4+ 5       0.0069      0.03  Q V       |         |         |         |
4+10       0.0071      0.03  Q V       |         |         |         |
4+15       0.0073      0.03  Q V       |         |         |         |
4+20       0.0075      0.03  Q V       |         |         |         |
4+25       0.0078      0.04  Q V       |         |         |         |
4+30       0.0080      0.04  Q V       |         |         |         |
4+35       0.0083      0.04  Q  V      |         |         |         |
4+40       0.0085      0.04  Q  V      |         |         |         |
4+45       0.0088      0.04  Q  V      |         |         |         |
4+50       0.0090      0.04  Q  V      |         |         |         |
4+55       0.0093      0.04  Q  V      |         |         |         |
5+ 0       0.0096      0.04  Q  V      |         |         |         |
5+ 5       0.0099      0.04  Q  V      |         |         |         |
5+10       0.0101      0.03  Q  V      |         |         |         |
5+15       0.0103      0.03  Q  V      |         |         |         |
5+20       0.0105      0.03  Q  V      |         |         |         |
5+25       0.0108      0.04  Q   V     |         |         |         |
5+30       0.0110      0.04  Q   V     |         |         |         |
5+35       0.0113      0.04  Q   V     |         |         |         |
5+40       0.0116      0.04  Q   V     |         |         |         |
5+45       0.0118      0.04  Q   V     |         |         |         |
5+50       0.0121      0.04  Q   V     |         |         |         |
5+55       0.0124      0.04  Q   V     |         |         |         |
6+ 0       0.0127      0.04  Q   V     |         |         |         |
6+ 5       0.0130      0.04  Q   V     |         |         |         |
6+10       0.0133      0.05  Q   V     |         |         |         |
6+15       0.0136      0.05  Q    V    |         |         |         |
6+20       0.0140      0.05  Q    V    |         |         |         |
6+25       0.0143      0.05  Q    V    |         |         |         |
6+30       0.0146      0.05  Q    V    |         |         |         |
6+35       0.0149      0.05  Q    V    |         |         |         |
6+40       0.0153      0.05  Q    V    |         |         |         |
6+45       0.0156      0.05  Q    V    |         |         |         |
6+50       0.0160      0.05  Q    V    |         |         |         |
6+55       0.0163      0.05  Q     V   |         |         |         |
7+ 0       0.0167      0.05  Q     V   |         |         |         |
7+ 5       0.0171      0.05  Q     V   |         |         |         |
7+10       0.0174      0.05  Q     V   |         |         |         |
7+15       0.0178      0.05  Q     V   |         |         |         |
7+20       0.0181      0.05  Q     V   |         |         |         |
7+25       0.0185      0.06  Q     V   |         |         |         |
7+30       0.0189      0.06  Q      V  |         |         |         |
7+35       0.0193      0.06  Q      V  |         |         |         |
7+40       0.0197      0.06  Q      V  |         |         |         |
7+45       0.0202      0.06  Q      V  |         |         |         |
7+50       0.0206      0.06  Q      V  |         |         |         |
7+55       0.0211      0.07  Q      V  |         |         |         |
8+ 0       0.0215      0.07  Q       V |         |         |         |
8+ 5       0.0220      0.07  Q       V |         |         |         |
8+10       0.0225      0.08  Q       V |         |         |         |
8+15       0.0231      0.08  Q       V |         |         |         |
8+20       0.0236      0.08  Q       V |         |         |         |
8+25       0.0241      0.08  Q        V|         |         |         |
8+30       0.0247      0.08  Q        V|         |         |         |
8+35       0.0252      0.08  Q        V|         |         |         |
8+40       0.0258      0.08  Q        V|         |         |         |
8+45       0.0264      0.08  Q        V|         |         |         |
8+50       0.0269      0.08  Q         V         |         |         |
8+55       0.0275      0.09  Q         V         |         |         |
9+ 0       0.0282      0.09  Q         V         |         |         |
9+ 5       0.0288      0.09  Q         V         |         |         |
9+10       0.0294      0.10  Q          |V        |         |         |
9+15       0.0301      0.10  Q          |V        |         |         |
9+20       0.0308      0.10  Q          |V        |         |         |
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9+25	0.0315	0.10	Q	
9+30	0.0322	0.10	Q	
9+35	0.0330	0.11	Q	
9+40	0.0337	0.11	Q	
9+45	0.0344	0.11	Q	
9+50	0.0352	0.11	Q	
9+55	0.0360	0.11	Q	
10+ 0	0.0368	0.11	Q	
10+ 5	0.0375	0.10	Q	
10+10	0.0380	0.08	Q	
10+15	0.0386	0.08	Q	
10+20	0.0391	0.08	Q	
10+25	0.0397	0.08	Q	
10+30	0.0402	0.08	Q	
10+35	0.0408	0.09	Q	
10+40	0.0415	0.10	Q	
10+45	0.0422	0.10	Q	
10+50	0.0429	0.10	Q	
10+55	0.0436	0.10	Q	
11+ 0	0.0443	0.10	Q	
11+ 5	0.0450	0.10	Q	
11+10	0.0457	0.10	Q	
11+15	0.0464	0.10	Q	
11+20	0.0471	0.10	Q	
11+25	0.0478	0.10	Q	
11+30	0.0484	0.10	Q	
11+35	0.0491	0.09	Q	
11+40	0.0497	0.09	Q	
11+45	0.0503	0.09	Q	
11+50	0.0509	0.09	Q	
11+55	0.0516	0.09	Q	
12+ 0	0.0522	0.09	Q	
12+ 5	0.0529	0.11	Q	
12+10	0.0538	0.12	Q	
12+15	0.0547	0.13	Q	
12+20	0.0556	0.13	Q	
12+25	0.0565	0.13	Q	
12+30	0.0574	0.13	Q	
12+35	0.0584	0.14	Q	
12+40	0.0594	0.14	Q	
12+45	0.0603	0.14	Q	
12+50	0.0614	0.15	Q	
12+55	0.0624	0.15	Q	
13+ 0	0.0634	0.15	Q	
13+ 5	0.0645	0.16	Q	
13+10	0.0657	0.17	Q	
13+15	0.0669	0.17	Q	
13+20	0.0681	0.18	Q	
13+25	0.0693	0.18	Q	
13+30	0.0705	0.18	Q	
13+35	0.0716	0.16	Q	
13+40	0.0725	0.13	Q	
13+45	0.0733	0.12	Q	
13+50	0.0742	0.12	Q	
13+55	0.0750	0.12	Q	
14+ 0	0.0758	0.12	Q	
14+ 5	0.0767	0.13	Q	
14+10	0.0776	0.14	Q	
14+15	0.0786	0.14	Q	
14+20	0.0795	0.14	Q	
14+25	0.0805	0.14	Q	
14+30	0.0814	0.14	Q	
14+35	0.0823	0.13	Q	
14+40	0.0833	0.13	Q	
14+45	0.0842	0.13	Q	
14+50	0.0851	0.13	Q	
14+55	0.0860	0.13	Q	
15+ 0	0.0869	0.13	Q	
15+ 5	0.0878	0.13	Q	
15+10	0.0886	0.13	Q	
15+15	0.0895	0.12	Q	
15+20	0.0903	0.12	Q	
15+25	0.0912	0.12	Q	
15+30	0.0920	0.12	Q	
15+35	0.0928	0.11	Q	
15+40	0.0935	0.10	Q	
15+45	0.0941	0.10	Q	
15+50	0.0948	0.10	Q	
15+55	0.0955	0.10	Q	
16+ 0	0.0962	0.10	Q	
16+ 5	0.0967	0.07	Q	
16+10	0.0969	0.03	Q	
16+15	0.0971	0.03	Q	
16+20	0.0972	0.02	Q	
16+25	0.0974	0.02	Q	
16+30	0.0975	0.02	Q	
16+35	0.0976	0.02	Q	

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16+40    0.0978    0.02  Q  |  |  |  V  |
16+45    0.0979    0.02  Q  |  |  |  V  |
16+50    0.0980    0.02  Q  |  |  |  V  |
16+55    0.0981    0.02  Q  |  |  |  V  |
17+ 0    0.0982    0.02  Q  |  |  |  V  |
17+ 5    0.0983    0.02  Q  |  |  |  V  |
17+10    0.0985    0.02  Q  |  |  |  V  |
17+15    0.0987    0.03  Q  |  |  |  V  |
17+20    0.0988    0.03  Q  |  |  |  V  |
17+25    0.0990    0.03  Q  |  |  |  V  |
17+30    0.0992    0.03  Q  |  |  |   V |
17+35    0.0994    0.03  Q  |  |  |   V |
17+40    0.0996    0.03  Q  |  |  |   V |
17+45    0.0997    0.03  Q  |  |  |   V |
17+50    0.0999    0.02  Q  |  |  |   V |
17+55    0.1000    0.02  Q  |  |  |   V |
18+ 0    0.1002    0.02  Q  |  |  |   V |
18+ 5    0.1003    0.02  Q  |  |  |   V |
18+10    0.1005    0.02  Q  |  |  |   V |
18+15    0.1006    0.02  Q  |  |  |   V |
18+20    0.1008    0.02  Q  |  |  |   V |
18+25    0.1009    0.02  Q  |  |  |   V |
18+30    0.1010    0.02  Q  |  |  |   V |
18+35    0.1012    0.02  Q  |  |  |   V |
18+40    0.1013    0.02  Q  |  |  |   V |
18+45    0.1014    0.02  Q  |  |  |   V |
18+50    0.1015    0.01  Q  |  |  |   V |
18+55    0.1016    0.01  Q  |  |  |   V |
19+ 0    0.1016    0.01  Q  |  |  |   V |
19+ 5    0.1017    0.01  Q  |  |  |    V |
19+10    0.1018    0.01  Q  |  |  |    V |
19+15    0.1019    0.02  Q  |  |  |    V |
19+20    0.1021    0.02  Q  |  |  |    V |
19+25    0.1022    0.02  Q  |  |  |    V |
19+30    0.1023    0.02  Q  |  |  |    V |
19+35    0.1025    0.02  Q  |  |  |    V |
19+40    0.1026    0.02  Q  |  |  |    V |
19+45    0.1027    0.02  Q  |  |  |    V |
19+50    0.1028    0.01  Q  |  |  |    V |
19+55    0.1029    0.01  Q  |  |  |    V |
20+ 0    0.1029    0.01  Q  |  |  |    V |
20+ 5    0.1030    0.01  Q  |  |  |    V |
20+10    0.1031    0.01  Q  |  |  |    V |
20+15    0.1032    0.02  Q  |  |  |    V |
20+20    0.1033    0.02  Q  |  |  |    V |
20+25    0.1034    0.02  Q  |  |  |    V |
20+30    0.1035    0.02  Q  |  |  |    V |
20+35    0.1037    0.02  Q  |  |  |    V |
20+40    0.1038    0.02  Q  |  |  |    V |
20+45    0.1039    0.02  Q  |  |  |    V |
20+50    0.1040    0.01  Q  |  |  |    V |
20+55    0.1040    0.01  Q  |  |  |    V |
21+ 0    0.1041    0.01  Q  |  |  |    V |
21+ 5    0.1042    0.01  Q  |  |  |    V |
21+10    0.1043    0.01  Q  |  |  |    V |
21+15    0.1044    0.02  Q  |  |  |     V|
21+20    0.1045    0.01  Q  |  |  |     V|
21+25    0.1046    0.01  Q  |  |  |     V|
21+30    0.1046    0.01  Q  |  |  |     V|
21+35    0.1047    0.01  Q  |  |  |     V|
21+40    0.1048    0.01  Q  |  |  |     V|
21+45    0.1049    0.02  Q  |  |  |     V|
21+50    0.1050    0.01  Q  |  |  |     V|
21+55    0.1051    0.01  Q  |  |  |     V|
22+ 0    0.1052    0.01  Q  |  |  |     V|
22+ 5    0.1053    0.01  Q  |  |  |     V|
22+10    0.1054    0.01  Q  |  |  |     V|
22+15    0.1055    0.02  Q  |  |  |     V|
22+20    0.1056    0.01  Q  |  |  |     V|
22+25    0.1056    0.01  Q  |  |  |     V|
22+30    0.1057    0.01  Q  |  |  |     V|
22+35    0.1058    0.01  Q  |  |  |     V|
22+40    0.1059    0.01  Q  |  |  |     V|
22+45    0.1059    0.01  Q  |  |  |     V|
22+50    0.1060    0.01  Q  |  |  |     V|
22+55    0.1061    0.01  Q  |  |  |     V|
23+ 0    0.1061    0.01  Q  |  |  |     V|
23+ 5    0.1062    0.01  Q  |  |  |     V|
23+10    0.1063    0.01  Q  |  |  |     V|
23+15    0.1064    0.01  Q  |  |  |     V|
23+20    0.1064    0.01  Q  |  |  |     V|
23+25    0.1065    0.01  Q  |  |  |     V|
23+30    0.1066    0.01  Q  |  |  |     V|
23+35    0.1066    0.01  Q  |  |  |     V|
23+40    0.1067    0.01  Q  |  |  |     V|
23+45    0.1068    0.01  Q  |  |  |     V|
23+50    0.1069    0.01  Q  |  |  |     V|
```

```
   23+55       0.1069      0.01  Q          |          |          |         v|
   24+ 0       0.1070      0.01  Q          |          |          |         v|
   24+ 5       0.1070      0.01  Q          |          |          |         v|
   24+10       0.1071      0.00  Q          |          |          |         v|
   24+15       0.1071      0.00  Q          |          |          |         v|
   24+20       0.1071      0.00  Q          |          |          |         v|
------------------------------------------------------------------------------
```

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

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                Study date  06/06/22 File: EX515.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.50                 4.01

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.30                10.44

STORM EVENT (YEAR) =    5.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.687(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    0.687(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               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	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	4.20	0.346	(0.574)	0.312	0.035
2	0.17	4.30	0.355	(0.574)	0.319	0.035
3	0.25	5.00	0.412	(0.574)	0.371	0.041
4	0.33	5.00	0.412	(0.574)	0.371	0.041
5	0.42	5.80	0.478	(0.574)	0.431	0.048
6	0.50	6.50	0.536	(0.574)	0.483	0.054
7	0.58	7.40	0.610	(0.574)	0.549	0.061
8	0.67	8.60	0.709	0.574	(0.638)	0.135
9	0.75	12.30	1.014	0.574	(0.913)	0.441
10	0.83	29.10	2.400	0.574	(2.160)	1.826
11	0.92	6.80	0.561	(0.574)	0.505	0.056
12	1.00	5.00	0.412	(0.574)	0.371	0.041
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	2.8

Flood volume = Effective rainfall 0.23(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.45(In)
Total soil loss = 0.303(Ac.Ft)
Total rainfall = 0.69(In)
Flood volume = 6836.6 Cubic Feet
Total soil loss = 13198.3 Cubic Feet

Peak flow rate of this hydrograph = 7.357(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	2.5	5.0	7.5	10.0
0+ 5	0.0007	0.10	Q				
0+10	0.0023	0.23	Q				
0+15	0.0043	0.28	Q				
0+20	0.0065	0.32	Q				
0+25	0.0089	0.35	QV				
0+30	0.0116	0.39	QV				
0+35	0.0147	0.44	Q V				
0+40	0.0195	0.70	Q V				
0+45	0.0326	1.90	QV				
0+50	0.0826	7.26			V Q		
0+55	0.1333	7.36			Q V		
1+ 0	0.1473	2.03	Q			V	
1+ 5	0.1537	0.93	Q				V
1+10	0.1567	0.43	Q				V
1+15	0.1569	0.03	Q				V
1+20	0.1569	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  06/06/22 File: EX535.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =    5.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.034(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.034(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.161	(0.574)	0.145	0.016
2	0.17	1.30	0.161	(0.574)	0.145	0.016
3	0.25	1.10	0.137	(0.574)	0.123	0.014
4	0.33	1.50	0.186	(0.574)	0.168	0.019
5	0.42	1.50	0.186	(0.574)	0.168	0.019
6	0.50	1.80	0.223	(0.574)	0.201	0.022
7	0.58	1.50	0.186	(0.574)	0.168	0.019
8	0.67	1.80	0.223	(0.574)	0.201	0.022
9	0.75	1.80	0.223	(0.574)	0.201	0.022
10	0.83	1.50	0.186	(0.574)	0.168	0.019
11	0.92	1.60	0.199	(0.574)	0.179	0.020
12	1.00	1.80	0.223	(0.574)	0.201	0.022
13	1.08	2.20	0.273	(0.574)	0.246	0.027
14	1.17	2.20	0.273	(0.574)	0.246	0.027
15	1.25	2.20	0.273	(0.574)	0.246	0.027
16	1.33	2.00	0.248	(0.574)	0.223	0.025
17	1.42	2.60	0.323	(0.574)	0.290	0.032
18	1.50	2.70	0.335	(0.574)	0.302	0.034
19	1.58	2.40	0.298	(0.574)	0.268	0.030
20	1.67	2.70	0.335	(0.574)	0.302	0.034
21	1.75	3.30	0.410	(0.574)	0.369	0.041
22	1.83	3.10	0.385	(0.574)	0.346	0.038
23	1.92	2.90	0.360	(0.574)	0.324	0.036
24	2.00	3.00	0.372	(0.574)	0.335	0.037
25	2.08	3.10	0.385	(0.574)	0.346	0.038
26	2.17	4.20	0.521	(0.574)	0.469	0.052
27	2.25	5.00	0.621	(0.574)	0.558	0.062
28	2.33	3.50	0.434	(0.574)	0.391	0.043
29	2.42	6.80	0.844	0.574	(0.760)	0.270
30	2.50	7.30	0.906	0.574	(0.815)	0.332
31	2.58	8.20	1.018	0.574	(0.916)	0.444
32	2.67	5.90	0.732	0.574	(0.659)	0.158
33	2.75	2.00	0.248	(0.574)	0.223	0.025
34	2.83	1.80	0.223	(0.574)	0.201	0.022
35	2.92	1.80	0.223	(0.574)	0.201	0.022
36	3.00	0.60	0.074	(0.574)	0.067	0.007
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	2.1

Flood volume = Effective rainfall 0.17(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.1(Ac.Ft)
Total soil loss = 0.86(In)
Total soil loss = 0.575(Ac.Ft)
Total rainfall = 1.03(In)
Flood volume = 5088.7 Cubic Feet
Total soil loss = 25056.8 Cubic Feet

Peak flow rate of this hydrograph = 2.814(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	2.5	5.0	7.5	10.0
0+ 5	0.0003	0.05	Q	|	|	|	|
0+10	0.0011	0.11	Q	|	|	|	|
0+15	0.0019	0.11	Q	|	|	|	|
0+20	0.0027	0.13	Q	|	|	|	|
0+25	0.0037	0.15	QV	|	|	|	|
0+30	0.0048	0.16	QV	|	|	|	|
0+35	0.0060	0.16	Q V	|	|	|	|
0+40	0.0071	0.17	Q V	|	|	|	|
0+45	0.0083	0.18	Q V	|	|	|	|
0+50	0.0095	0.17	Q V	|	|	|	|
0+55	0.0106	0.16	Q V	|	|	|	|
1+ 0	0.0117	0.17	Q V	|	|	|	|
1+ 5	0.0131	0.19	Q V	|	|	|	|
1+10	0.0145	0.21	Q V	|	|	|	|
1+15	0.0160	0.22	Q V	|	|	|	|
1+20	0.0175	0.21	Q V	|	|	|	|

```
    1+25       0.0190      0.23  Q     V   |          |          |          |
    1+30       0.0208      0.26  |Q     V  |          |          |          |
    1+35       0.0226      0.25  |Q     V  |          |          |          |
    1+40       0.0243      0.26  |Q      V |          |          |          |
    1+45       0.0263      0.29  |Q       V|          |          |          |
    1+50       0.0285      0.31  |Q       V|          |          |          |
    1+55       0.0306      0.30  |Q        V          |          |          |
    2+ 0       0.0326      0.30  |Q         |V         |          |          |
    2+ 5       0.0347      0.31  |Q         |V         |          |          |
    2+10       0.0371      0.35  |Q         | V        |          |          |
    2+15       0.0401      0.43  |Q         |  V       |          |          |
    2+20       0.0430      0.42  |Q         |   V      |          |          |
    2+25       0.0503      1.05  |   Q      |       V  |          |          |
    2+30       0.0645      2.07  |       Q  |          | V        |          |
    2+35       0.0839      2.81  |         Q|          |       V  |          |
    2+40       0.1011      2.50  |          Q          |          |   V      |
    2+45       0.1093      1.20  |   Q      |          |          |      V   |
    2+50       0.1129      0.52  | Q        |          |          |       V  |
    2+55       0.1151      0.32  |Q         |          |          |        V |
    3+ 0       0.1162      0.17  Q          |          |          |        V |
    3+ 5       0.1166      0.06  Q          |          |          |        V |
    3+10       0.1168      0.02  Q          |          |          |        V |
    3+15       0.1168      0.01  Q          |          |          |        V |
    3+20       0.1168      0.00  Q          |          |          |        V |
-------------------------------------------------------------------------
```

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

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                Study date  06/06/22 File: EX565.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =    5.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    1.351(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.351(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.081	(0.574)	0.073	0.008
2	0.17	0.60	0.097	(0.574)	0.088	0.010
3	0.25	0.60	0.097	(0.574)	0.088	0.010
4	0.33	0.60	0.097	(0.574)	0.088	0.010
5	0.42	0.60	0.097	(0.574)	0.088	0.010
6	0.50	0.70	0.114	(0.574)	0.102	0.011
7	0.58	0.70	0.114	(0.574)	0.102	0.011
8	0.67	0.70	0.114	(0.574)	0.102	0.011
9	0.75	0.70	0.114	(0.574)	0.102	0.011
10	0.83	0.70	0.114	(0.574)	0.102	0.011
11	0.92	0.70	0.114	(0.574)	0.102	0.011
12	1.00	0.80	0.130	(0.574)	0.117	0.013
13	1.08	0.80	0.130	(0.574)	0.117	0.013
14	1.17	0.80	0.130	(0.574)	0.117	0.013
15	1.25	0.80	0.130	(0.574)	0.117	0.013
16	1.33	0.80	0.130	(0.574)	0.117	0.013
17	1.42	0.80	0.130	(0.574)	0.117	0.013
18	1.50	0.80	0.130	(0.574)	0.117	0.013
19	1.58	0.80	0.130	(0.574)	0.117	0.013
20	1.67	0.80	0.130	(0.574)	0.117	0.013
21	1.75	0.80	0.130	(0.574)	0.117	0.013
22	1.83	0.80	0.130	(0.574)	0.117	0.013
23	1.92	0.80	0.130	(0.574)	0.117	0.013
24	2.00	0.90	0.146	(0.574)	0.131	0.015
25	2.08	0.80	0.130	(0.574)	0.117	0.013
26	2.17	0.90	0.146	(0.574)	0.131	0.015
27	2.25	0.90	0.146	(0.574)	0.131	0.015
28	2.33	0.90	0.146	(0.574)	0.131	0.015
29	2.42	0.90	0.146	(0.574)	0.131	0.015
30	2.50	0.90	0.146	(0.574)	0.131	0.015
31	2.58	0.90	0.146	(0.574)	0.131	0.015
32	2.67	0.90	0.146	(0.574)	0.131	0.015
33	2.75	1.00	0.162	(0.574)	0.146	0.016
34	2.83	1.00	0.162	(0.574)	0.146	0.016
35	2.92	1.00	0.162	(0.574)	0.146	0.016
36	3.00	1.00	0.162	(0.574)	0.146	0.016
37	3.08	1.00	0.162	(0.574)	0.146	0.016
38	3.17	1.10	0.178	(0.574)	0.161	0.018
39	3.25	1.10	0.178	(0.574)	0.161	0.018
40	3.33	1.10	0.178	(0.574)	0.161	0.018
41	3.42	1.20	0.195	(0.574)	0.175	0.019
42	3.50	1.30	0.211	(0.574)	0.190	0.021
43	3.58	1.40	0.227	(0.574)	0.204	0.023
44	3.67	1.40	0.227	(0.574)	0.204	0.023
45	3.75	1.50	0.243	(0.574)	0.219	0.024
46	3.83	1.50	0.243	(0.574)	0.219	0.024
47	3.92	1.60	0.259	(0.574)	0.234	0.026
48	4.00	1.60	0.259	(0.574)	0.234	0.026
49	4.08	1.70	0.276	(0.574)	0.248	0.028
50	4.17	1.80	0.292	(0.574)	0.263	0.029
51	4.25	1.90	0.308	(0.574)	0.277	0.031
52	4.33	2.00	0.324	(0.574)	0.292	0.032
53	4.42	2.10	0.341	(0.574)	0.306	0.034
54	4.50	2.10	0.341	(0.574)	0.306	0.034
55	4.58	2.20	0.357	(0.574)	0.321	0.036
56	4.67	2.30	0.373	(0.574)	0.336	0.037
57	4.75	2.40	0.389	(0.574)	0.350	0.039
58	4.83	2.40	0.389	(0.574)	0.350	0.039
59	4.92	2.50	0.405	(0.574)	0.365	0.041
60	5.00	2.60	0.422	(0.574)	0.379	0.042
61	5.08	3.10	0.503	(0.574)	0.452	0.050
62	5.17	3.60	0.584	(0.574)	0.525	0.058
63	5.25	3.90	0.632	(0.574)	0.569	0.063
64	5.33	4.20	0.681	0.574	(0.613)	0.107
65	5.42	4.70	0.762	0.574	(0.686)	0.188
66	5.50	5.60	0.908	0.574	(0.817)	0.334
67	5.58	1.90	0.308	(0.574)	0.277	0.031
68	5.67	0.90	0.146	(0.574)	0.131	0.015
69	5.75	0.60	0.097	(0.574)	0.088	0.010
70	5.83	0.50	0.081	(0.574)	0.073	0.008
71	5.92	0.30	0.049	(0.574)	0.044	0.005
72	6.00	0.20	0.032	(0.574)	0.029	0.003
		(Loss Rate Not Used)				

```
 Sum =     100.0                                    Sum =     2.0
    Flood volume = Effective rainfall      0.17(In)
     times area       8.0(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
    Total soil loss =      1.18(In)
    Total soil loss =     0.792(Ac.Ft)
    Total rainfall =      1.35(In)
    Flood volume =        4896.6 Cubic Feet
    Total soil loss =       34492.3 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      1.824(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        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0002      0.02  Q         |         |         |         |
  0+10       0.0006      0.06  Q         |         |         |         |
  0+15       0.0011      0.07  Q         |         |         |         |
  0+20       0.0016      0.08  Q         |         |         |         |
  0+25       0.0021      0.08  Q         |         |         |         |
  0+30       0.0027      0.08  Q         |         |         |         |
  0+35       0.0033      0.09  QV        |         |         |         |
  0+40       0.0040      0.09  QV        |         |         |         |
  0+45       0.0046      0.09  QV        |         |         |         |
  0+50       0.0052      0.09  QV        |         |         |         |
  0+55       0.0059      0.09  Q V       |         |         |         |
  1+ 0       0.0065      0.10  Q V       |         |         |         |
  1+ 5       0.0072      0.10  Q V       |         |         |         |
  1+10       0.0079      0.10  Q V       |         |         |         |
  1+15       0.0087      0.10  Q  V      |         |         |         |
  1+20       0.0094      0.11  Q  V      |         |         |         |
  1+25       0.0101      0.11  Q  V      |         |         |         |
  1+30       0.0108      0.11  Q  V      |         |         |         |
  1+35       0.0116      0.11  Q   V     |         |         |         |
  1+40       0.0123      0.11  Q   V     |         |         |         |
  1+45       0.0130      0.11  Q   V     |         |         |         |
  1+50       0.0137      0.11  Q   V     |         |         |         |
  1+55       0.0145      0.11  Q    V    |         |         |         |
  2+ 0       0.0152      0.11  Q    V    |         |         |         |
  2+ 5       0.0160      0.11  Q    V    |         |         |         |
  2+10       0.0167      0.11  Q    V    |         |         |         |
  2+15       0.0175      0.12  Q     V   |         |         |         |
  2+20       0.0184      0.12  Q     V   |         |         |         |
  2+25       0.0192      0.12  Q     V   |         |         |         |
  2+30       0.0200      0.12  Q      V  |         |         |         |
  2+35       0.0208      0.12  Q      V  |         |         |         |
  2+40       0.0216      0.12  Q      V  |         |         |         |
  2+45       0.0225      0.12  Q      V  |         |         |         |
  2+50       0.0233      0.13  Q       V |         |         |         |
  2+55       0.0242      0.13  Q       V |         |         |         |
  3+ 0       0.0251      0.13  Q       V |         |         |         |
  3+ 5       0.0260      0.13  Q        V|         |         |         |
  3+10       0.0270      0.14  Q        V|         |         |         |
  3+15       0.0280      0.14  Q        V|         |         |         |
  3+20       0.0290      0.14  Q         V         |         |         |
  3+25       0.0300      0.15  Q         V         |         |         |
  3+30       0.0311      0.16  Q         |V        |         |         |
  3+35       0.0323      0.17  Q         |V        |         |         |
  3+40       0.0335      0.18  Q         |V        |         |         |
  3+45       0.0348      0.19  Q         | V       |         |         |
  3+50       0.0361      0.19  Q         | V       |         |         |
  3+55       0.0375      0.20  Q         |  V      |         |         |
  4+ 0       0.0390      0.21  Q         |  V      |         |         |
  4+ 5       0.0404      0.21  Q         |   V     |         |         |
  4+10       0.0420      0.23  Q         |   V     |         |         |
  4+15       0.0436      0.24  Q         |    V    |         |         |
  4+20       0.0453      0.25  |Q        |     V   |         |         |
  4+25       0.0472      0.26  |Q        |     V   |         |         |
  4+30       0.0490      0.27  |Q        |      V  |         |         |
  4+35       0.0510      0.28  |Q        |       V |         |         |
  4+40       0.0530      0.29  |Q        |       V |         |         |
  4+45       0.0551      0.30  |Q        |        V|         |         |
  4+50       0.0572      0.31  |Q        |         V         |         |
  4+55       0.0594      0.32  |Q        |         |V        |         |
  5+ 0       0.0617      0.33  |Q        |         |V        |         |
  5+ 5       0.0642      0.36  |Q        |         | V       |         |
  5+10       0.0671      0.42  |Q        |         |  V      |         |
  5+15       0.0703      0.47  |Q        |         |    V    |         |
  5+20       0.0746      0.63  | Q       |         |     V   |         |
  5+25       0.0818      1.05  |   Q     |         |         V|        |
  5+30       0.0944      1.82  |      Q  |         |          |  V     |
  5+35       0.1050      1.54  |     Q   |         |          |     V  |
```

```
    5+40       0.1086      0.52  | Q       |         |         |       V |
    5+45       0.1104      0.27  |Q        |         |         |        V|
    5+50       0.1115      0.15  Q         |         |         |        V|
    5+55       0.1119      0.06  Q         |         |         |        V|
    6+ 0       0.1122      0.04  Q         |         |         |        V|
    6+ 5       0.1123      0.02  Q         |         |         |        V|
    6+10       0.1124      0.01  Q         |         |         |        V|
    6+15       0.1124      0.00  Q         |         |         |        V|
    6+20       0.1124      0.00  Q         |         |         |        V|
-------------------------------------------------------------------------
```

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

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                Study date  06/06/22 File: EX5245.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =    5.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    2.162(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.162(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  49.8      0.574     0.000        0.574       1.000      0.574
                                                 Sum (F) =   0.574
Area averaged mean soil loss (F) (In/Hr) =  0.574
Minimum soil loss rate ((In/Hr)) =  0.287
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.017	(1.017)	0.016	0.002
2	0.17	0.07	0.017	(1.014)	0.016	0.002
3	0.25	0.07	0.017	(1.010)	0.016	0.002
4	0.33	0.10	0.026	(1.006)	0.023	0.003
5	0.42	0.10	0.026	(1.002)	0.023	0.003
6	0.50	0.10	0.026	(0.998)	0.023	0.003
7	0.58	0.10	0.026	(0.994)	0.023	0.003
8	0.67	0.10	0.026	(0.990)	0.023	0.003
9	0.75	0.10	0.026	(0.986)	0.023	0.003
10	0.83	0.13	0.035	(0.982)	0.031	0.003
11	0.92	0.13	0.035	(0.978)	0.031	0.003
12	1.00	0.13	0.035	(0.975)	0.031	0.003
13	1.08	0.10	0.026	(0.971)	0.023	0.003
14	1.17	0.10	0.026	(0.967)	0.023	0.003
15	1.25	0.10	0.026	(0.963)	0.023	0.003
16	1.33	0.10	0.026	(0.959)	0.023	0.003
17	1.42	0.10	0.026	(0.955)	0.023	0.003
18	1.50	0.10	0.026	(0.952)	0.023	0.003
19	1.58	0.10	0.026	(0.948)	0.023	0.003
20	1.67	0.10	0.026	(0.944)	0.023	0.003
21	1.75	0.10	0.026	(0.940)	0.023	0.003
22	1.83	0.13	0.035	(0.936)	0.031	0.003
23	1.92	0.13	0.035	(0.933)	0.031	0.003
24	2.00	0.13	0.035	(0.929)	0.031	0.003
25	2.08	0.13	0.035	(0.925)	0.031	0.003
26	2.17	0.13	0.035	(0.921)	0.031	0.003
27	2.25	0.13	0.035	(0.918)	0.031	0.003
28	2.33	0.13	0.035	(0.914)	0.031	0.003
29	2.42	0.13	0.035	(0.910)	0.031	0.003
30	2.50	0.13	0.035	(0.906)	0.031	0.003
31	2.58	0.17	0.043	(0.903)	0.039	0.004
32	2.67	0.17	0.043	(0.899)	0.039	0.004
33	2.75	0.17	0.043	(0.895)	0.039	0.004
34	2.83	0.17	0.043	(0.892)	0.039	0.004
35	2.92	0.17	0.043	(0.888)	0.039	0.004
36	3.00	0.17	0.043	(0.884)	0.039	0.004
37	3.08	0.17	0.043	(0.881)	0.039	0.004
38	3.17	0.17	0.043	(0.877)	0.039	0.004
39	3.25	0.17	0.043	(0.873)	0.039	0.004
40	3.33	0.17	0.043	(0.870)	0.039	0.004
41	3.42	0.17	0.043	(0.866)	0.039	0.004
42	3.50	0.17	0.043	(0.862)	0.039	0.004
43	3.58	0.17	0.043	(0.859)	0.039	0.004
44	3.67	0.17	0.043	(0.855)	0.039	0.004
45	3.75	0.17	0.043	(0.852)	0.039	0.004
46	3.83	0.20	0.052	(0.848)	0.047	0.005
47	3.92	0.20	0.052	(0.844)	0.047	0.005
48	4.00	0.20	0.052	(0.841)	0.047	0.005
49	4.08	0.20	0.052	(0.837)	0.047	0.005
50	4.17	0.20	0.052	(0.834)	0.047	0.005
51	4.25	0.20	0.052	(0.830)	0.047	0.005
52	4.33	0.23	0.061	(0.827)	0.054	0.006
53	4.42	0.23	0.061	(0.823)	0.054	0.006
54	4.50	0.23	0.061	(0.820)	0.054	0.006
55	4.58	0.23	0.061	(0.816)	0.054	0.006
56	4.67	0.23	0.061	(0.813)	0.054	0.006
57	4.75	0.23	0.061	(0.809)	0.054	0.006
58	4.83	0.27	0.069	(0.806)	0.062	0.007
59	4.92	0.27	0.069	(0.802)	0.062	0.007
60	5.00	0.27	0.069	(0.799)	0.062	0.007
61	5.08	0.20	0.052	(0.795)	0.047	0.005
62	5.17	0.20	0.052	(0.792)	0.047	0.005
63	5.25	0.20	0.052	(0.788)	0.047	0.005
64	5.33	0.23	0.061	(0.785)	0.054	0.006
65	5.42	0.23	0.061	(0.781)	0.054	0.006
66	5.50	0.23	0.061	(0.778)	0.054	0.006
67	5.58	0.27	0.069	(0.775)	0.062	0.007
68	5.67	0.27	0.069	(0.771)	0.062	0.007
69	5.75	0.27	0.069	(0.768)	0.062	0.007
70	5.83	0.27	0.069	(0.764)	0.062	0.007
71	5.92	0.27	0.069	(0.761)	0.062	0.007
72	6.00	0.27	0.069	(0.758)	0.062	0.007
73	6.08	0.30	0.078	(0.754)	0.070	0.008

74	6.17	0.30	0.078	(0.751)	0.070	0.008
75	6.25	0.30	0.078	(0.748)	0.070	0.008
76	6.33	0.30	0.078	(0.744)	0.070	0.008
77	6.42	0.30	0.078	(0.741)	0.070	0.008
78	6.50	0.30	0.078	(0.738)	0.070	0.008
79	6.58	0.33	0.086	(0.734)	0.078	0.009
80	6.67	0.33	0.086	(0.731)	0.078	0.009
81	6.75	0.33	0.086	(0.728)	0.078	0.009
82	6.83	0.33	0.086	(0.724)	0.078	0.009
83	6.92	0.33	0.086	(0.721)	0.078	0.009
84	7.00	0.33	0.086	(0.718)	0.078	0.009
85	7.08	0.33	0.086	(0.715)	0.078	0.009
86	7.17	0.33	0.086	(0.711)	0.078	0.009
87	7.25	0.33	0.086	(0.708)	0.078	0.009
88	7.33	0.37	0.095	(0.705)	0.086	0.010
89	7.42	0.37	0.095	(0.702)	0.086	0.010
90	7.50	0.37	0.095	(0.698)	0.086	0.010
91	7.58	0.40	0.104	(0.695)	0.093	0.010
92	7.67	0.40	0.104	(0.692)	0.093	0.010
93	7.75	0.40	0.104	(0.689)	0.093	0.010
94	7.83	0.43	0.112	(0.686)	0.101	0.011
95	7.92	0.43	0.112	(0.682)	0.101	0.011
96	8.00	0.43	0.112	(0.679)	0.101	0.011
97	8.08	0.50	0.130	(0.676)	0.117	0.013
98	8.17	0.50	0.130	(0.673)	0.117	0.013
99	8.25	0.50	0.130	(0.670)	0.117	0.013
100	8.33	0.50	0.130	(0.667)	0.117	0.013
101	8.42	0.50	0.130	(0.664)	0.117	0.013
102	8.50	0.50	0.130	(0.660)	0.117	0.013
103	8.58	0.53	0.138	(0.657)	0.125	0.014
104	8.67	0.53	0.138	(0.654)	0.125	0.014
105	8.75	0.53	0.138	(0.651)	0.125	0.014
106	8.83	0.57	0.147	(0.648)	0.132	0.015
107	8.92	0.57	0.147	(0.645)	0.132	0.015
108	9.00	0.57	0.147	(0.642)	0.132	0.015
109	9.08	0.63	0.164	(0.639)	0.148	0.016
110	9.17	0.63	0.164	(0.636)	0.148	0.016
111	9.25	0.63	0.164	(0.633)	0.148	0.016
112	9.33	0.67	0.173	(0.630)	0.156	0.017
113	9.42	0.67	0.173	(0.627)	0.156	0.017
114	9.50	0.67	0.173	(0.624)	0.156	0.017
115	9.58	0.70	0.182	(0.621)	0.163	0.018
116	9.67	0.70	0.182	(0.618)	0.163	0.018
117	9.75	0.70	0.182	(0.615)	0.163	0.018
118	9.83	0.73	0.190	(0.612)	0.171	0.019
119	9.92	0.73	0.190	(0.609)	0.171	0.019
120	10.00	0.73	0.190	(0.606)	0.171	0.019
121	10.08	0.50	0.130	(0.603)	0.117	0.013
122	10.17	0.50	0.130	(0.600)	0.117	0.013
123	10.25	0.50	0.130	(0.597)	0.117	0.013
124	10.33	0.50	0.130	(0.594)	0.117	0.013
125	10.42	0.50	0.130	(0.592)	0.117	0.013
126	10.50	0.50	0.130	(0.589)	0.117	0.013
127	10.58	0.67	0.173	(0.586)	0.156	0.017
128	10.67	0.67	0.173	(0.583)	0.156	0.017
129	10.75	0.67	0.173	(0.580)	0.156	0.017
130	10.83	0.67	0.173	(0.577)	0.156	0.017
131	10.92	0.67	0.173	(0.574)	0.156	0.017
132	11.00	0.67	0.173	(0.572)	0.156	0.017
133	11.08	0.63	0.164	(0.569)	0.148	0.016
134	11.17	0.63	0.164	(0.566)	0.148	0.016
135	11.25	0.63	0.164	(0.563)	0.148	0.016
136	11.33	0.63	0.164	(0.560)	0.148	0.016
137	11.42	0.63	0.164	(0.558)	0.148	0.016
138	11.50	0.63	0.164	(0.555)	0.148	0.016
139	11.58	0.57	0.147	(0.552)	0.132	0.015
140	11.67	0.57	0.147	(0.549)	0.132	0.015
141	11.75	0.57	0.147	(0.547)	0.132	0.015
142	11.83	0.60	0.156	(0.544)	0.140	0.016
143	11.92	0.60	0.156	(0.541)	0.140	0.016
144	12.00	0.60	0.156	(0.538)	0.140	0.016
145	12.08	0.83	0.216	(0.536)	0.195	0.022
146	12.17	0.83	0.216	(0.533)	0.195	0.022
147	12.25	0.83	0.216	(0.530)	0.195	0.022
148	12.33	0.87	0.225	(0.528)	0.202	0.022
149	12.42	0.87	0.225	(0.525)	0.202	0.022
150	12.50	0.87	0.225	(0.522)	0.202	0.022
151	12.58	0.93	0.242	(0.520)	0.218	0.024
152	12.67	0.93	0.242	(0.517)	0.218	0.024
153	12.75	0.93	0.242	(0.515)	0.218	0.024
154	12.83	0.97	0.251	(0.512)	0.226	0.025
155	12.92	0.97	0.251	(0.509)	0.226	0.025
156	13.00	0.97	0.251	(0.507)	0.226	0.025
157	13.08	1.13	0.294	(0.504)	0.265	0.029
158	13.17	1.13	0.294	(0.502)	0.265	0.029
159	13.25	1.13	0.294	(0.499)	0.265	0.029
160	13.33	1.13	0.294	(0.497)	0.265	0.029

161	13.42	1.13	0.294	(0.494)	0.265	0.029
162	13.50	1.13	0.294	(0.492)	0.265	0.029
163	13.58	0.77	0.199	(0.489)	0.179	0.020
164	13.67	0.77	0.199	(0.487)	0.179	0.020
165	13.75	0.77	0.199	(0.484)	0.179	0.020
166	13.83	0.77	0.199	(0.482)	0.179	0.020
167	13.92	0.77	0.199	(0.479)	0.179	0.020
168	14.00	0.77	0.199	(0.477)	0.179	0.020
169	14.08	0.90	0.234	(0.474)	0.210	0.023
170	14.17	0.90	0.234	(0.472)	0.210	0.023
171	14.25	0.90	0.234	(0.469)	0.210	0.023
172	14.33	0.87	0.225	(0.467)	0.202	0.022
173	14.42	0.87	0.225	(0.465)	0.202	0.022
174	14.50	0.87	0.225	(0.462)	0.202	0.022
175	14.58	0.87	0.225	(0.460)	0.202	0.022
176	14.67	0.87	0.225	(0.458)	0.202	0.022
177	14.75	0.87	0.225	(0.455)	0.202	0.022
178	14.83	0.83	0.216	(0.453)	0.195	0.022
179	14.92	0.83	0.216	(0.451)	0.195	0.022
180	15.00	0.83	0.216	(0.448)	0.195	0.022
181	15.08	0.80	0.208	(0.446)	0.187	0.021
182	15.17	0.80	0.208	(0.444)	0.187	0.021
183	15.25	0.80	0.208	(0.441)	0.187	0.021
184	15.33	0.77	0.199	(0.439)	0.179	0.020
185	15.42	0.77	0.199	(0.437)	0.179	0.020
186	15.50	0.77	0.199	(0.435)	0.179	0.020
187	15.58	0.63	0.164	(0.432)	0.148	0.016
188	15.67	0.63	0.164	(0.430)	0.148	0.016
189	15.75	0.63	0.164	(0.428)	0.148	0.016
190	15.83	0.63	0.164	(0.426)	0.148	0.016
191	15.92	0.63	0.164	(0.424)	0.148	0.016
192	16.00	0.63	0.164	(0.421)	0.148	0.016
193	16.08	0.13	0.035	(0.419)	0.031	0.003
194	16.17	0.13	0.035	(0.417)	0.031	0.003
195	16.25	0.13	0.035	(0.415)	0.031	0.003
196	16.33	0.13	0.035	(0.413)	0.031	0.003
197	16.42	0.13	0.035	(0.411)	0.031	0.003
198	16.50	0.13	0.035	(0.409)	0.031	0.003
199	16.58	0.10	0.026	(0.407)	0.023	0.003
200	16.67	0.10	0.026	(0.405)	0.023	0.003
201	16.75	0.10	0.026	(0.403)	0.023	0.003
202	16.83	0.10	0.026	(0.401)	0.023	0.003
203	16.92	0.10	0.026	(0.398)	0.023	0.003
204	17.00	0.10	0.026	(0.396)	0.023	0.003
205	17.08	0.17	0.043	(0.394)	0.039	0.004
206	17.17	0.17	0.043	(0.392)	0.039	0.004
207	17.25	0.17	0.043	(0.390)	0.039	0.004
208	17.33	0.17	0.043	(0.389)	0.039	0.004
209	17.42	0.17	0.043	(0.387)	0.039	0.004
210	17.50	0.17	0.043	(0.385)	0.039	0.004
211	17.58	0.17	0.043	(0.383)	0.039	0.004
212	17.67	0.17	0.043	(0.381)	0.039	0.004
213	17.75	0.17	0.043	(0.379)	0.039	0.004
214	17.83	0.13	0.035	(0.377)	0.031	0.003
215	17.92	0.13	0.035	(0.375)	0.031	0.003
216	18.00	0.13	0.035	(0.373)	0.031	0.003
217	18.08	0.13	0.035	(0.371)	0.031	0.003
218	18.17	0.13	0.035	(0.370)	0.031	0.003
219	18.25	0.13	0.035	(0.368)	0.031	0.003
220	18.33	0.13	0.035	(0.366)	0.031	0.003
221	18.42	0.13	0.035	(0.364)	0.031	0.003
222	18.50	0.13	0.035	(0.363)	0.031	0.003
223	18.58	0.10	0.026	(0.361)	0.023	0.003
224	18.67	0.10	0.026	(0.359)	0.023	0.003
225	18.75	0.10	0.026	(0.357)	0.023	0.003
226	18.83	0.07	0.017	(0.356)	0.016	0.002
227	18.92	0.07	0.017	(0.354)	0.016	0.002
228	19.00	0.07	0.017	(0.352)	0.016	0.002
229	19.08	0.10	0.026	(0.351)	0.023	0.003
230	19.17	0.10	0.026	(0.349)	0.023	0.003
231	19.25	0.10	0.026	(0.347)	0.023	0.003
232	19.33	0.13	0.035	(0.346)	0.031	0.003
233	19.42	0.13	0.035	(0.344)	0.031	0.003
234	19.50	0.13	0.035	(0.342)	0.031	0.003
235	19.58	0.10	0.026	(0.341)	0.023	0.003
236	19.67	0.10	0.026	(0.339)	0.023	0.003
237	19.75	0.10	0.026	(0.338)	0.023	0.003
238	19.83	0.07	0.017	(0.336)	0.016	0.002
239	19.92	0.07	0.017	(0.335)	0.016	0.002
240	20.00	0.07	0.017	(0.333)	0.016	0.002
241	20.08	0.10	0.026	(0.332)	0.023	0.003
242	20.17	0.10	0.026	(0.330)	0.023	0.003
243	20.25	0.10	0.026	(0.329)	0.023	0.003
244	20.33	0.10	0.026	(0.328)	0.023	0.003
245	20.42	0.10	0.026	(0.326)	0.023	0.003
246	20.50	0.10	0.026	(0.325)	0.023	0.003
247	20.58	0.10	0.026	(0.323)	0.023	0.003

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248  20.67     0.10      0.026       (  0.322)       0.023        0.003
249  20.75     0.10      0.026       (  0.321)       0.023        0.003
250  20.83     0.07      0.017       (  0.319)       0.016        0.002
251  20.92     0.07      0.017       (  0.318)       0.016        0.002
252  21.00     0.07      0.017       (  0.317)       0.016        0.002
253  21.08     0.10      0.026       (  0.316)       0.023        0.003
254  21.17     0.10      0.026       (  0.314)       0.023        0.003
255  21.25     0.10      0.026       (  0.313)       0.023        0.003
256  21.33     0.07      0.017       (  0.312)       0.016        0.002
257  21.42     0.07      0.017       (  0.311)       0.016        0.002
258  21.50     0.07      0.017       (  0.310)       0.016        0.002
259  21.58     0.10      0.026       (  0.308)       0.023        0.003
260  21.67     0.10      0.026       (  0.307)       0.023        0.003
261  21.75     0.10      0.026       (  0.306)       0.023        0.003
262  21.83     0.07      0.017       (  0.305)       0.016        0.002
263  21.92     0.07      0.017       (  0.304)       0.016        0.002
264  22.00     0.07      0.017       (  0.303)       0.016        0.002
265  22.08     0.10      0.026       (  0.302)       0.023        0.003
266  22.17     0.10      0.026       (  0.301)       0.023        0.003
267  22.25     0.10      0.026       (  0.300)       0.023        0.003
268  22.33     0.07      0.017       (  0.299)       0.016        0.002
269  22.42     0.07      0.017       (  0.298)       0.016        0.002
270  22.50     0.07      0.017       (  0.297)       0.016        0.002
271  22.58     0.07      0.017       (  0.297)       0.016        0.002
272  22.67     0.07      0.017       (  0.296)       0.016        0.002
273  22.75     0.07      0.017       (  0.295)       0.016        0.002
274  22.83     0.07      0.017       (  0.294)       0.016        0.002
275  22.92     0.07      0.017       (  0.293)       0.016        0.002
276  23.00     0.07      0.017       (  0.293)       0.016        0.002
277  23.08     0.07      0.017       (  0.292)       0.016        0.002
278  23.17     0.07      0.017       (  0.291)       0.016        0.002
279  23.25     0.07      0.017       (  0.291)       0.016        0.002
280  23.33     0.07      0.017       (  0.290)       0.016        0.002
281  23.42     0.07      0.017       (  0.290)       0.016        0.002
282  23.50     0.07      0.017       (  0.289)       0.016        0.002
283  23.58     0.07      0.017       (  0.289)       0.016        0.002
284  23.67     0.07      0.017       (  0.288)       0.016        0.002
285  23.75     0.07      0.017       (  0.288)       0.016        0.002
286  23.83     0.07      0.017       (  0.287)       0.016        0.002
287  23.92     0.07      0.017       (  0.287)       0.016        0.002
288  24.00     0.07      0.017       (  0.287)       0.016        0.002
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     2.6
      Flood volume = Effective rainfall      0.22(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       0.1(Ac.Ft)
      Total soil loss =      1.95(In)
      Total soil loss =     1.302(Ac.Ft)
      Total rainfall =      2.16(In)
      Flood volume =        6302.3 Cubic Feet
      Total soil loss =       56720.7 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.238(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        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0000      0.01  Q          |         |         |         |
   0+10       0.0001      0.01  Q          |         |         |         |
   0+15       0.0002      0.01  Q          |         |         |         |
   0+20       0.0003      0.02  Q          |         |         |         |
   0+25       0.0005      0.02  Q          |         |         |         |
   0+30       0.0006      0.02  Q          |         |         |         |
   0+35       0.0007      0.02  Q          |         |         |         |
   0+40       0.0009      0.02  Q          |         |         |         |
   0+45       0.0010      0.02  Q          |         |         |         |
   0+50       0.0012      0.02  Q          |         |         |         |
   0+55       0.0014      0.03  Q          |         |         |         |
   1+ 0       0.0016      0.03  Q          |         |         |         |
   1+ 5       0.0017      0.03  Q          |         |         |         |
   1+10       0.0019      0.02  Q          |         |         |         |
   1+15       0.0020      0.02  Q          |         |         |         |
   1+20       0.0022      0.02  Q          |         |         |         |
   1+25       0.0023      0.02  Q          |         |         |         |
   1+30       0.0025      0.02  Q          |         |         |         |
   1+35       0.0026      0.02  Q          |         |         |         |
   1+40       0.0028      0.02  Q          |         |         |         |
   1+45       0.0029      0.02  Q          |         |         |         |
   1+50       0.0031      0.02  Q          |         |         |         |
   1+55       0.0033      0.03  Q          |         |         |         |
   2+ 0       0.0034      0.03  Q          |         |         |         |
   2+ 5       0.0036      0.03  QV         |         |         |         |
```

```
2+10       0.0038      0.03  QV        |         |         |         |
2+15       0.0040      0.03  QV        |         |         |         |
2+20       0.0042      0.03  QV        |         |         |         |
2+25       0.0044      0.03  QV        |         |         |         |
2+30       0.0046      0.03  QV        |         |         |         |
2+35       0.0048      0.03  QV        |         |         |         |
2+40       0.0050      0.03  QV        |         |         |         |
2+45       0.0053      0.03  QV        |         |         |         |
2+50       0.0055      0.03  QV        |         |         |         |
2+55       0.0058      0.04  QV        |         |         |         |
3+ 0       0.0060      0.04  QV        |         |         |         |
3+ 5       0.0062      0.04  QV        |         |         |         |
3+10       0.0065      0.04  QV        |         |         |         |
3+15       0.0067      0.04  QV        |         |         |         |
3+20       0.0070      0.04  QV        |         |         |         |
3+25       0.0072      0.04  QV        |         |         |         |
3+30       0.0075      0.04  Q V       |         |         |         |
3+35       0.0077      0.04  Q V       |         |         |         |
3+40       0.0079      0.04  Q V       |         |         |         |
3+45       0.0082      0.04  Q V       |         |         |         |
3+50       0.0084      0.04  Q V       |         |         |         |
3+55       0.0087      0.04  Q V       |         |         |         |
4+ 0       0.0090      0.04  Q V       |         |         |         |
4+ 5       0.0093      0.04  Q V       |         |         |         |
4+10       0.0096      0.04  Q V       |         |         |         |
4+15       0.0099      0.04  Q V       |         |         |         |
4+20       0.0102      0.04  Q V       |         |         |         |
4+25       0.0105      0.05  Q V       |         |         |         |
4+30       0.0108      0.05  Q V       |         |         |         |
4+35       0.0112      0.05  Q  V      |         |         |         |
4+40       0.0115      0.05  Q  V      |         |         |         |
4+45       0.0119      0.05  Q  V      |         |         |         |
4+50       0.0122      0.05  Q  V      |         |         |         |
4+55       0.0126      0.05  Q  V      |         |         |         |
5+ 0       0.0130      0.06  Q  V      |         |         |         |
5+ 5       0.0133      0.05  Q  V      |         |         |         |
5+10       0.0136      0.04  Q  V      |         |         |         |
5+15       0.0139      0.04  Q  V      |         |         |         |
5+20       0.0142      0.04  Q  V      |         |         |         |
5+25       0.0146      0.05  Q   V     |         |         |         |
5+30       0.0149      0.05  Q   V     |         |         |         |
5+35       0.0152      0.05  Q   V     |         |         |         |
5+40       0.0156      0.05  Q   V     |         |         |         |
5+45       0.0160      0.06  Q   V     |         |         |         |
5+50       0.0164      0.06  Q   V     |         |         |         |
5+55       0.0168      0.06  Q   V     |         |         |         |
6+ 0       0.0172      0.06  Q   V     |         |         |         |
6+ 5       0.0176      0.06  Q   V     |         |         |         |
6+10       0.0180      0.06  Q   V     |         |         |         |
6+15       0.0184      0.06  Q    V    |         |         |         |
6+20       0.0189      0.06  Q    V    |         |         |         |
6+25       0.0193      0.06  Q    V    |         |         |         |
6+30       0.0197      0.06  Q    V    |         |         |         |
6+35       0.0202      0.07  Q    V    |         |         |         |
6+40       0.0206      0.07  Q    V    |         |         |         |
6+45       0.0211      0.07  Q    V    |         |         |         |
6+50       0.0216      0.07  Q    V    |         |         |         |
6+55       0.0221      0.07  Q     V   |         |         |         |
7+ 0       0.0226      0.07  Q     V   |         |         |         |
7+ 5       0.0231      0.07  Q     V   |         |         |         |
7+10       0.0235      0.07  Q     V   |         |         |         |
7+15       0.0240      0.07  Q     V   |         |         |         |
7+20       0.0245      0.07  Q     V   |         |         |         |
7+25       0.0250      0.08  Q     V   |         |         |         |
7+30       0.0256      0.08  Q      V  |         |         |         |
7+35       0.0261      0.08  Q      V  |         |         |         |
7+40       0.0267      0.08  Q      V  |         |         |         |
7+45       0.0273      0.08  Q      V  |         |         |         |
7+50       0.0279      0.09  Q      V  |         |         |         |
7+55       0.0285      0.09  Q      V  |         |         |         |
8+ 0       0.0291      0.09  Q       V |         |         |         |
8+ 5       0.0298      0.10  Q       V |         |         |         |
8+10       0.0305      0.10  Q       V |         |         |         |
8+15       0.0312      0.10  Q       V |         |         |         |
8+20       0.0319      0.10  Q       V |         |         |         |
8+25       0.0326      0.11  Q        V|         |         |         |
8+30       0.0334      0.11  Q        V|         |         |         |
8+35       0.0341      0.11  Q        V|         |         |         |
8+40       0.0349      0.11  Q        V|         |         |         |
8+45       0.0356      0.11  Q        V|         |         |         |
8+50       0.0364      0.11  Q         V         |         |         |
8+55       0.0372      0.12  Q         V         |         |         |
9+ 0       0.0380      0.12  Q         V         |         |         |
9+ 5       0.0389      0.12  Q         V         |         |         |
9+10       0.0398      0.13  Q          |V        |         |         |
9+15       0.0407      0.13  Q          |V        |         |         |
9+20       0.0416      0.14  Q          |V        |         |         |
```

9+25	0.0426	0.14	Q	
9+30	0.0436	0.14	Q	
9+35	0.0445	0.14	Q	
9+40	0.0455	0.15	Q	
9+45	0.0465	0.15	Q	
9+50	0.0476	0.15	Q	
9+55	0.0486	0.15	Q	
10+ 0	0.0497	0.15	Q	
10+ 5	0.0506	0.14	Q	
10+10	0.0514	0.11	Q	
10+15	0.0522	0.11	Q	
10+20	0.0529	0.11	Q	
10+25	0.0536	0.11	Q	
10+30	0.0543	0.11	Q	
10+35	0.0551	0.12	Q	
10+40	0.0561	0.13	Q	
10+45	0.0570	0.14	Q	
10+50	0.0580	0.14	Q	
10+55	0.0589	0.14	Q	
11+ 0	0.0599	0.14	Q	
11+ 5	0.0608	0.14	Q	
11+10	0.0618	0.13	Q	
11+15	0.0627	0.13	Q	
11+20	0.0636	0.13	Q	
11+25	0.0645	0.13	Q	
11+30	0.0654	0.13	Q	
11+35	0.0663	0.13	Q	
11+40	0.0672	0.12	Q	
11+45	0.0680	0.12	Q	
11+50	0.0688	0.12	Q	
11+55	0.0697	0.12	Q	
12+ 0	0.0706	0.13	Q	
12+ 5	0.0715	0.14	Q	
12+10	0.0727	0.17	Q	
12+15	0.0739	0.17	Q	
12+20	0.0751	0.18	Q	
12+25	0.0763	0.18	Q	
12+30	0.0776	0.18	Q	
12+35	0.0789	0.19	Q	
12+40	0.0802	0.19	Q	
12+45	0.0816	0.20	Q	
12+50	0.0829	0.20	Q	
12+55	0.0843	0.20	Q	
13+ 0	0.0857	0.20	Q	
13+ 5	0.0872	0.22	Q	
13+10	0.0888	0.23	Q	
13+15	0.0904	0.24	Q	
13+20	0.0920	0.24	Q	
13+25	0.0937	0.24	Q	
13+30	0.0953	0.24	Q	
13+35	0.0968	0.21	Q	
13+40	0.0980	0.17	Q	
13+45	0.0991	0.17	Q	
13+50	0.1002	0.16	Q	
13+55	0.1013	0.16	Q	
14+ 0	0.1025	0.16	Q	
14+ 5	0.1036	0.17	Q	
14+10	0.1049	0.18	Q	
14+15	0.1062	0.19	Q	
14+20	0.1075	0.19	Q	
14+25	0.1087	0.18	Q	
14+30	0.1100	0.18	Q	
14+35	0.1112	0.18	Q	
14+40	0.1125	0.18	Q	
14+45	0.1138	0.18	Q	
14+50	0.1150	0.18	Q	
14+55	0.1162	0.18	Q	
15+ 0	0.1174	0.18	Q	
15+ 5	0.1186	0.17	Q	
15+10	0.1198	0.17	Q	
15+15	0.1209	0.17	Q	
15+20	0.1221	0.17	Q	
15+25	0.1232	0.16	Q	
15+30	0.1243	0.16	Q	
15+35	0.1253	0.15	Q	
15+40	0.1263	0.14	Q	
15+45	0.1272	0.13	Q	
15+50	0.1281	0.13	Q	
15+55	0.1291	0.13	Q	
16+ 0	0.1300	0.13	Q	
16+ 5	0.1306	0.09	Q	
16+10	0.1309	0.05	Q	
16+15	0.1312	0.04	Q	
16+20	0.1314	0.03	Q	
16+25	0.1316	0.03	Q	
16+30	0.1318	0.03	Q	
16+35	0.1320	0.03	Q	

```
16+40       0.1321      0.02  Q          |          |          |      V    |
16+45       0.1323      0.02  Q          |          |          |      V    |
16+50       0.1324      0.02  Q          |          |          |      V    |
16+55       0.1325      0.02  Q          |          |          |      V    |
17+ 0       0.1327      0.02  Q          |          |          |      V    |
17+ 5       0.1329      0.03  Q          |          |          |      V    |
17+10       0.1331      0.03  Q          |          |          |      V    |
17+15       0.1333      0.03  Q          |          |          |      V    |
17+20       0.1336      0.03  Q          |          |          |      V    |
17+25       0.1338      0.04  Q          |          |          |      V    |
17+30       0.1340      0.04  Q          |          |          |       V   |
17+35       0.1343      0.04  Q          |          |          |       V   |
17+40       0.1345      0.04  Q          |          |          |       V   |
17+45       0.1348      0.04  Q          |          |          |       V   |
17+50       0.1350      0.03  Q          |          |          |       V   |
17+55       0.1352      0.03  Q          |          |          |       V   |
18+ 0       0.1354      0.03  Q          |          |          |       V   |
18+ 5       0.1356      0.03  Q          |          |          |       V   |
18+10       0.1358      0.03  Q          |          |          |       V   |
18+15       0.1360      0.03  Q          |          |          |       V   |
18+20       0.1362      0.03  Q          |          |          |       V   |
18+25       0.1364      0.03  Q          |          |          |       V   |
18+30       0.1366      0.03  Q          |          |          |       V   |
18+35       0.1367      0.03  Q          |          |          |       V   |
18+40       0.1369      0.02  Q          |          |          |       V   |
18+45       0.1370      0.02  Q          |          |          |       V   |
18+50       0.1372      0.02  Q          |          |          |       V   |
18+55       0.1373      0.02  Q          |          |          |       V   |
19+ 0       0.1374      0.01  Q          |          |          |       V   |
19+ 5       0.1375      0.02  Q          |          |          |        V  |
19+10       0.1376      0.02  Q          |          |          |        V  |
19+15       0.1378      0.02  Q          |          |          |        V  |
19+20       0.1379      0.02  Q          |          |          |        V  |
19+25       0.1381      0.03  Q          |          |          |        V  |
19+30       0.1383      0.03  Q          |          |          |        V  |
19+35       0.1385      0.03  Q          |          |          |        V  |
19+40       0.1386      0.02  Q          |          |          |        V  |
19+45       0.1388      0.02  Q          |          |          |        V  |
19+50       0.1389      0.02  Q          |          |          |        V  |
19+55       0.1390      0.02  Q          |          |          |        V  |
20+ 0       0.1391      0.01  Q          |          |          |        V  |
20+ 5       0.1392      0.02  Q          |          |          |        V  |
20+10       0.1393      0.02  Q          |          |          |        V  |
20+15       0.1395      0.02  Q          |          |          |        V  |
20+20       0.1396      0.02  Q          |          |          |        V  |
20+25       0.1398      0.02  Q          |          |          |        V  |
20+30       0.1399      0.02  Q          |          |          |        V  |
20+35       0.1401      0.02  Q          |          |          |        V  |
20+40       0.1402      0.02  Q          |          |          |        V  |
20+45       0.1404      0.02  Q          |          |          |        V  |
20+50       0.1405      0.02  Q          |          |          |        V  |
20+55       0.1406      0.02  Q          |          |          |        V  |
21+ 0       0.1407      0.01  Q          |          |          |        V  |
21+ 5       0.1408      0.02  Q          |          |          |        V  |
21+10       0.1409      0.02  Q          |          |          |        V  |
21+15       0.1411      0.02  Q          |          |          |         V |
21+20       0.1412      0.02  Q          |          |          |         V |
21+25       0.1413      0.02  Q          |          |          |         V |
21+30       0.1414      0.01  Q          |          |          |         V |
21+35       0.1415      0.02  Q          |          |          |         V |
21+40       0.1417      0.02  Q          |          |          |         V |
21+45       0.1418      0.02  Q          |          |          |         V |
21+50       0.1419      0.02  Q          |          |          |         V |
21+55       0.1420      0.02  Q          |          |          |         V |
22+ 0       0.1421      0.01  Q          |          |          |         V |
22+ 5       0.1422      0.02  Q          |          |          |         V |
22+10       0.1424      0.02  Q          |          |          |         V |
22+15       0.1425      0.02  Q          |          |          |         V |
22+20       0.1427      0.02  Q          |          |          |         V |
22+25       0.1428      0.02  Q          |          |          |         V |
22+30       0.1429      0.01  Q          |          |          |         V |
22+35       0.1430      0.01  Q          |          |          |         V |
22+40       0.1431      0.01  Q          |          |          |         V |
22+45       0.1431      0.01  Q          |          |          |         V |
22+50       0.1432      0.01  Q          |          |          |         V |
22+55       0.1433      0.01  Q          |          |          |         V |
23+ 0       0.1434      0.01  Q          |          |          |         V |
23+ 5       0.1435      0.01  Q          |          |          |         V |
23+10       0.1436      0.01  Q          |          |          |         V |
23+15       0.1437      0.01  Q          |          |          |         V |
23+20       0.1438      0.01  Q          |          |          |         V |
23+25       0.1439      0.01  Q          |          |          |         V |
23+30       0.1440      0.01  Q          |          |          |         V |
23+35       0.1441      0.01  Q          |          |          |         V |
23+40       0.1442      0.01  Q          |          |          |         V |
23+45       0.1443      0.01  Q          |          |          |         V |
23+50       0.1444      0.01  Q          |          |          |         V |
```

```
   23+55       0.1445      0.01  Q          |          |          |         v|
   24+ 0       0.1446      0.01  Q          |          |          |         v|
   24+ 5       0.1447      0.01  Q          |          |          |         v|
   24+10       0.1447      0.00  Q          |          |          |         v|
   24+15       0.1447      0.00  Q          |          |          |         v|
   24+20       0.1447      0.00  Q          |          |          |          v
------------------------------------------------------------------------------
```

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
                Study date  06/06/22 File: EX10110.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.50                 4.01

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.30                10.44

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.829(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    0.829(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.900
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               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	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	4.20	0.418	0.373	(0.376)	0.045
2	0.17	4.30	0.428	0.373	(0.385)	0.055
3	0.25	5.00	0.497	0.373	(0.448)	0.125
4	0.33	5.00	0.497	0.373	(0.448)	0.125
5	0.42	5.80	0.577	0.373	(0.519)	0.204
6	0.50	6.50	0.647	0.373	(0.582)	0.274
7	0.58	7.40	0.736	0.373	(0.663)	0.363
8	0.67	8.60	0.856	0.373	(0.770)	0.483
9	0.75	12.30	1.224	0.373	(1.101)	0.851
10	0.83	29.10	2.895	0.373	(2.606)	2.522
11	0.92	6.80	0.677	0.373	(0.609)	0.304
12	1.00	5.00	0.497	0.373	(0.448)	0.125
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	5.5

Flood volume = Effective rainfall 0.46(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.37(In)
Total soil loss = 0.249(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 13299.7 Cubic Feet
Total soil loss = 10866.7 Cubic Feet

Peak flow rate of this hydrograph = 11.312(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	5.0	10.0	15.0	20.0
0+ 5	0.0009	0.14	Q				
0+10	0.0032	0.33	Q				
0+15	0.0075	0.62	VQ				
0+20	0.0136	0.90	|Q				
0+25	0.0220	1.21	| Q				
0+30	0.0339	1.74	| QV				
0+35	0.0501	2.34	| Q V				
0+40	0.0716	3.12	| Q V				
0+45	0.1045	4.78	| Q | V				
0+50	0.1824	11.31	| |	QV			
0+55	0.2596	11.20	| |	Q | V		
1+ 0	0.2871	4.00	| Q |		V	
1+ 5	0.2994	1.78	| Q |			V
1+10	0.3044	0.73	|Q |			V
1+15	0.3051	0.11	Q |			V
1+20	0.3053	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  06/06/22 File: EX10310.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.211(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.211(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.189	(0.373)	0.170	0.019
2	0.17	1.30	0.189	(0.373)	0.170	0.019
3	0.25	1.10	0.160	(0.373)	0.144	0.016
4	0.33	1.50	0.218	(0.373)	0.196	0.022
5	0.42	1.50	0.218	(0.373)	0.196	0.022
6	0.50	1.80	0.262	(0.373)	0.235	0.026
7	0.58	1.50	0.218	(0.373)	0.196	0.022
8	0.67	1.80	0.262	(0.373)	0.235	0.026
9	0.75	1.80	0.262	(0.373)	0.235	0.026
10	0.83	1.50	0.218	(0.373)	0.196	0.022
11	0.92	1.60	0.233	(0.373)	0.209	0.023
12	1.00	1.80	0.262	(0.373)	0.235	0.026
13	1.08	2.20	0.320	(0.373)	0.288	0.032
14	1.17	2.20	0.320	(0.373)	0.288	0.032
15	1.25	2.20	0.320	(0.373)	0.288	0.032
16	1.33	2.00	0.291	(0.373)	0.262	0.029
17	1.42	2.60	0.378	(0.373)	0.340	0.038
18	1.50	2.70	0.392	(0.373)	0.353	0.039
19	1.58	2.40	0.349	(0.373)	0.314	0.035
20	1.67	2.70	0.392	(0.373)	0.353	0.039
21	1.75	3.30	0.480	0.373	(0.432)	0.107
22	1.83	3.10	0.451	0.373	(0.406)	0.078
23	1.92	2.90	0.422	0.373	(0.379)	0.049
24	2.00	3.00	0.436	0.373	(0.392)	0.063
25	2.08	3.10	0.451	0.373	(0.406)	0.078
26	2.17	4.20	0.611	0.373	(0.549)	0.238
27	2.25	5.00	0.727	0.373	(0.654)	0.354
28	2.33	3.50	0.509	0.373	(0.458)	0.136
29	2.42	6.80	0.988	0.373	(0.890)	0.616
30	2.50	7.30	1.061	0.373	(0.955)	0.688
31	2.58	8.20	1.192	0.373	(1.073)	0.819
32	2.67	5.90	0.858	0.373	(0.772)	0.485
33	2.75	2.00	0.291	(0.373)	0.262	0.029
34	2.83	1.80	0.262	(0.373)	0.235	0.026
35	2.92	1.80	0.262	(0.373)	0.235	0.026
36	3.00	0.60	0.087	(0.373)	0.078	0.009
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	4.3

Flood volume = Effective rainfall 0.36(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 0.85(In)
Total soil loss = 0.568(Ac.Ft)
Total rainfall = 1.21(In)
Flood volume = 10555.9 Cubic Feet
Total soil loss = 24754.1 Cubic Feet

Peak flow rate of this hydrograph = 5.642(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	2.5	5.0	7.5	10.0
0+ 5	0.0004	0.06	Q	|	|	|	|
0+10	0.0013	0.13	Q	|	|	|	|
0+15	0.0022	0.13	Q	|	|	|	|
0+20	0.0032	0.15	Q	|	|	|	|
0+25	0.0044	0.17	Q	|	|	|	|
0+30	0.0057	0.19	Q	|	|	|	|
0+35	0.0070	0.19	QV	|	|	|	|
0+40	0.0083	0.19	QV	|	|	|	|
0+45	0.0097	0.21	QV	|	|	|	|
0+50	0.0111	0.20	QV	|	|	|	|
0+55	0.0124	0.19	Q V	|	|	|	|
1+ 0	0.0137	0.20	Q V	|	|	|	|
1+ 5	0.0153	0.23	Q V	|	|	|	|
1+10	0.0170	0.25	Q V	|	|	|	|
1+15	0.0188	0.26	|Q V	|	|	|	|
1+20	0.0205	0.25	Q V	|	|	|	|

```
    1+25       0.0223      0.27  |Q V       |          |          |          |
    1+30       0.0244      0.30  |Q  V      |          |          |          |
    1+35       0.0264      0.30  |Q  V      |          |          |          |
    1+40       0.0285      0.30  |Q  V      |          |          |          |
    1+45       0.0320      0.52  | Q  V     |          |          |          |
    1+50       0.0367      0.68  | Q   V    |          |          |          |
    1+55       0.0405      0.54  | Q   V    |          |          |          |
    2+ 0       0.0438      0.48  |Q     V   |          |          |          |
    2+ 5       0.0477      0.56  | Q    V   |          |          |          |
    2+10       0.0551      1.09  |   Q    V |          |          |          |
    2+15       0.0692      2.04  |      Q |V |          |          |          |
    2+20       0.0827      1.96  |      Q |  V       |          |          |
    2+25       0.1016      2.75  |         Q     V  |          |          |
    2+30       0.1335      4.63  |           |     Q | V        |          |
    2+35       0.1724      5.64  |           |       | Q     V  |          |
    2+40       0.2089      5.31  |           |       |Q         |   V      |
    2+45       0.2291      2.93  |           |Q      |          |     V    |
    2+50       0.2362      1.02  |   Q       |       |          |       V  |
    2+55       0.2399      0.54  | Q         |       |          |         V|
    3+ 0       0.2416      0.26  |Q          |       |          |         V|
    3+ 5       0.2421      0.07  Q           |       |          |         V|
    3+10       0.2423      0.02  Q           |       |          |         V|
    3+15       0.2423      0.01  Q           |       |          |         V|
    3+20       0.2423      0.00  Q           |       |          |         V|
-------------------------------------------------------------------------
```

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

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                Study date  06/06/22 File: EX10610.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    1.617(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.617(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	0.097	(0.373)	0.087	0.010
2	0.17	0.60	0.116	(0.373)	0.105	0.012
3	0.25	0.60	0.116	(0.373)	0.105	0.012
4	0.33	0.60	0.116	(0.373)	0.105	0.012
5	0.42	0.60	0.116	(0.373)	0.105	0.012
6	0.50	0.70	0.136	(0.373)	0.122	0.014
7	0.58	0.70	0.136	(0.373)	0.122	0.014
8	0.67	0.70	0.136	(0.373)	0.122	0.014
9	0.75	0.70	0.136	(0.373)	0.122	0.014
10	0.83	0.70	0.136	(0.373)	0.122	0.014
11	0.92	0.70	0.136	(0.373)	0.122	0.014
12	1.00	0.80	0.155	(0.373)	0.140	0.016
13	1.08	0.80	0.155	(0.373)	0.140	0.016
14	1.17	0.80	0.155	(0.373)	0.140	0.016
15	1.25	0.80	0.155	(0.373)	0.140	0.016
16	1.33	0.80	0.155	(0.373)	0.140	0.016
17	1.42	0.80	0.155	(0.373)	0.140	0.016
18	1.50	0.80	0.155	(0.373)	0.140	0.016
19	1.58	0.80	0.155	(0.373)	0.140	0.016
20	1.67	0.80	0.155	(0.373)	0.140	0.016
21	1.75	0.80	0.155	(0.373)	0.140	0.016
22	1.83	0.80	0.155	(0.373)	0.140	0.016
23	1.92	0.80	0.155	(0.373)	0.140	0.016
24	2.00	0.90	0.175	(0.373)	0.157	0.017
25	2.08	0.80	0.155	(0.373)	0.140	0.016
26	2.17	0.90	0.175	(0.373)	0.157	0.017
27	2.25	0.90	0.175	(0.373)	0.157	0.017
28	2.33	0.90	0.175	(0.373)	0.157	0.017
29	2.42	0.90	0.175	(0.373)	0.157	0.017
30	2.50	0.90	0.175	(0.373)	0.157	0.017
31	2.58	0.90	0.175	(0.373)	0.157	0.017
32	2.67	0.90	0.175	(0.373)	0.157	0.017
33	2.75	1.00	0.194	(0.373)	0.175	0.019
34	2.83	1.00	0.194	(0.373)	0.175	0.019
35	2.92	1.00	0.194	(0.373)	0.175	0.019
36	3.00	1.00	0.194	(0.373)	0.175	0.019
37	3.08	1.00	0.194	(0.373)	0.175	0.019
38	3.17	1.10	0.213	(0.373)	0.192	0.021
39	3.25	1.10	0.213	(0.373)	0.192	0.021
40	3.33	1.10	0.213	(0.373)	0.192	0.021
41	3.42	1.20	0.233	(0.373)	0.210	0.023
42	3.50	1.30	0.252	(0.373)	0.227	0.025
43	3.58	1.40	0.272	(0.373)	0.245	0.027
44	3.67	1.40	0.272	(0.373)	0.245	0.027
45	3.75	1.50	0.291	(0.373)	0.262	0.029
46	3.83	1.50	0.291	(0.373)	0.262	0.029
47	3.92	1.60	0.310	(0.373)	0.279	0.031
48	4.00	1.60	0.310	(0.373)	0.279	0.031
49	4.08	1.70	0.330	(0.373)	0.297	0.033
50	4.17	1.80	0.349	(0.373)	0.314	0.035
51	4.25	1.90	0.369	(0.373)	0.332	0.037
52	4.33	2.00	0.388	(0.373)	0.349	0.039
53	4.42	2.10	0.408	(0.373)	0.367	0.041
54	4.50	2.10	0.408	(0.373)	0.367	0.041
55	4.58	2.20	0.427	0.373	(0.384)	0.054
56	4.67	2.30	0.446	0.373	(0.402)	0.074
57	4.75	2.40	0.466	0.373	(0.419)	0.093
58	4.83	2.40	0.466	0.373	(0.419)	0.093
59	4.92	2.50	0.485	0.373	(0.437)	0.112
60	5.00	2.60	0.505	0.373	(0.454)	0.132
61	5.08	3.10	0.602	0.373	(0.541)	0.229
62	5.17	3.60	0.699	0.373	(0.629)	0.326
63	5.25	3.90	0.757	0.373	(0.681)	0.384
64	5.33	4.20	0.815	0.373	(0.734)	0.442
65	5.42	4.70	0.912	0.373	(0.821)	0.539
66	5.50	5.60	1.087	0.373	(0.978)	0.714
67	5.58	1.90	0.369	(0.373)	0.332	0.037
68	5.67	0.90	0.175	(0.373)	0.157	0.017
69	5.75	0.60	0.116	(0.373)	0.105	0.012
70	5.83	0.50	0.097	(0.373)	0.087	0.010
71	5.92	0.30	0.058	(0.373)	0.052	0.006
72	6.00	0.20	0.039	(0.373)	0.035	0.004
		(Loss Rate Not Used)				

```
 Sum =     100.0                                    Sum =     4.4
    Flood volume = Effective rainfall      0.36(In)
     times area       8.0(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
    Total soil loss =      1.25(In)
    Total soil loss =     0.839(Ac.Ft)
    Total rainfall =      1.62(In)
    Flood volume =       10603.6 Cubic Feet
    Total soil loss =       36532.1 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      4.711(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        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0002      0.03  Q         |         |         |         |
  0+10       0.0007      0.07  Q         |         |         |         |
  0+15       0.0013      0.09  Q         |         |         |         |
  0+20       0.0019      0.09  Q         |         |         |         |
  0+25       0.0026      0.09  Q         |         |         |         |
  0+30       0.0032      0.10  Q         |         |         |         |
  0+35       0.0040      0.11  Q         |         |         |         |
  0+40       0.0047      0.11  Q         |         |         |         |
  0+45       0.0055      0.11  Q         |         |         |         |
  0+50       0.0062      0.11  QV        |         |         |         |
  0+55       0.0070      0.11  QV        |         |         |         |
  1+ 0       0.0078      0.12  QV        |         |         |         |
  1+ 5       0.0086      0.12  QV        |         |         |         |
  1+10       0.0095      0.12  QV        |         |         |         |
  1+15       0.0104      0.13  QV        |         |         |         |
  1+20       0.0112      0.13  QV        |         |         |         |
  1+25       0.0121      0.13  QV        |         |         |         |
  1+30       0.0130      0.13  Q V       |         |         |         |
  1+35       0.0138      0.13  Q V       |         |         |         |
  1+40       0.0147      0.13  Q V       |         |         |         |
  1+45       0.0156      0.13  Q V       |         |         |         |
  1+50       0.0164      0.13  Q V       |         |         |         |
  1+55       0.0173      0.13  Q V       |         |         |         |
  2+ 0       0.0182      0.13  Q V       |         |         |         |
  2+ 5       0.0191      0.13  Q  V      |         |         |         |
  2+10       0.0200      0.13  Q  V      |         |         |         |
  2+15       0.0210      0.14  Q  V      |         |         |         |
  2+20       0.0220      0.14  Q  V      |         |         |         |
  2+25       0.0229      0.14  Q  V      |         |         |         |
  2+30       0.0239      0.14  Q  V      |         |         |         |
  2+35       0.0249      0.14  Q   V     |         |         |         |
  2+40       0.0259      0.14  Q   V     |         |         |         |
  2+45       0.0269      0.15  Q   V     |         |         |         |
  2+50       0.0279      0.15  Q   V     |         |         |         |
  2+55       0.0290      0.16  Q   V     |         |         |         |
  3+ 0       0.0301      0.16  Q   V     |         |         |         |
  3+ 5       0.0312      0.16  Q    V    |         |         |         |
  3+10       0.0323      0.16  Q    V    |         |         |         |
  3+15       0.0335      0.17  Q    V    |         |         |         |
  3+20       0.0346      0.17  Q    V    |         |         |         |
  3+25       0.0359      0.18  Q    V    |         |         |         |
  3+30       0.0372      0.19  Q     V   |         |         |         |
  3+35       0.0386      0.21  Q     V   |         |         |         |
  3+40       0.0401      0.22  Q     V   |         |         |         |
  3+45       0.0416      0.22  Q     V   |         |         |         |
  3+50       0.0432      0.23  Q      V  |         |         |         |
  3+55       0.0449      0.24  Q      V  |         |         |         |
  4+ 0       0.0466      0.25  Q      V  |         |         |         |
  4+ 5       0.0484      0.26  |Q     V  |         |         |         |
  4+10       0.0502      0.27  |Q      V |         |         |         |
  4+15       0.0522      0.28  |Q      V |         |         |         |
  4+20       0.0543      0.30  |Q      V |         |         |         |
  4+25       0.0564      0.32  |Q       V|         |         |         |
  4+30       0.0587      0.33  |Q       V|         |         |         |
  4+35       0.0612      0.37  |Q        V         |         |         |
  4+40       0.0645      0.48  |Q        V         |         |         |
  4+45       0.0688      0.62  | Q       |V        |         |         |
  4+50       0.0737      0.71  | Q       | V       |         |         |
  4+55       0.0792      0.80  |  Q      |  V      |         |         |
  5+ 0       0.0856      0.94  |  Q      |   V     |         |         |
  5+ 5       0.0947      1.32  |    Q    |    V    |         |         |
  5+10       0.1084      1.99  |      Q  |      V  |         |         |
  5+15       0.1265      2.62  |         Q         V         |         |
  5+20       0.1480      3.13  |         | Q       |   V     |         |
  5+25       0.1738      3.74  |         |   Q     |      V  |         |
  5+30       0.2062      4.71  |         |      Q  |         |  V      |
  5+35       0.2299      3.44  |         |  Q      |         |     V   |
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    5+40       0.2372      1.06  |   Q     |         |         |       V |
    5+45       0.2406      0.49  |Q        |         |         |        V|
    5+50       0.2423      0.25  Q         |         |         |        V|
    5+55       0.2428      0.08  Q         |         |         |        V|
    6+ 0       0.2432      0.05  Q         |         |         |        V|
    6+ 5       0.2434      0.03  Q         |         |         |        V|
    6+10       0.2434      0.01  Q         |         |         |        V|
    6+15       0.2434      0.00  Q         |         |         |        V|
    6+20       0.2434      0.00  Q         |         |         |         V
--------------------------------------------------------------------------
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        U n i t   H y d r o g r a p h   A n a l y s i s

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                Study date  06/06/22 File: EX102410.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    2.587(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.587(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089		3.002
2	0.167	334.354	45.727		3.701
3	0.250	501.531	10.276		0.832
4	0.333	668.708	4.352		0.352
5	0.417	835.884	2.557		0.207
			Sum = 100.000	Sum=	8.093

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	0.021	(0.661)	0.019	0.002
2	0.17	0.07	0.021	(0.658)	0.019	0.002
3	0.25	0.07	0.021	(0.656)	0.019	0.002
4	0.33	0.10	0.031	(0.653)	0.028	0.003
5	0.42	0.10	0.031	(0.651)	0.028	0.003
6	0.50	0.10	0.031	(0.648)	0.028	0.003
7	0.58	0.10	0.031	(0.646)	0.028	0.003
8	0.67	0.10	0.031	(0.643)	0.028	0.003
9	0.75	0.10	0.031	(0.641)	0.028	0.003
10	0.83	0.13	0.041	(0.638)	0.037	0.004
11	0.92	0.13	0.041	(0.636)	0.037	0.004
12	1.00	0.13	0.041	(0.633)	0.037	0.004
13	1.08	0.10	0.031	(0.631)	0.028	0.003
14	1.17	0.10	0.031	(0.628)	0.028	0.003
15	1.25	0.10	0.031	(0.626)	0.028	0.003
16	1.33	0.10	0.031	(0.623)	0.028	0.003
17	1.42	0.10	0.031	(0.621)	0.028	0.003
18	1.50	0.10	0.031	(0.618)	0.028	0.003
19	1.58	0.10	0.031	(0.616)	0.028	0.003
20	1.67	0.10	0.031	(0.613)	0.028	0.003
21	1.75	0.10	0.031	(0.611)	0.028	0.003
22	1.83	0.13	0.041	(0.608)	0.037	0.004
23	1.92	0.13	0.041	(0.606)	0.037	0.004
24	2.00	0.13	0.041	(0.603)	0.037	0.004
25	2.08	0.13	0.041	(0.601)	0.037	0.004
26	2.17	0.13	0.041	(0.598)	0.037	0.004
27	2.25	0.13	0.041	(0.596)	0.037	0.004
28	2.33	0.13	0.041	(0.594)	0.037	0.004
29	2.42	0.13	0.041	(0.591)	0.037	0.004
30	2.50	0.13	0.041	(0.589)	0.037	0.004
31	2.58	0.17	0.052	(0.586)	0.047	0.005
32	2.67	0.17	0.052	(0.584)	0.047	0.005
33	2.75	0.17	0.052	(0.582)	0.047	0.005
34	2.83	0.17	0.052	(0.579)	0.047	0.005
35	2.92	0.17	0.052	(0.577)	0.047	0.005
36	3.00	0.17	0.052	(0.574)	0.047	0.005
37	3.08	0.17	0.052	(0.572)	0.047	0.005
38	3.17	0.17	0.052	(0.570)	0.047	0.005
39	3.25	0.17	0.052	(0.567)	0.047	0.005
40	3.33	0.17	0.052	(0.565)	0.047	0.005
41	3.42	0.17	0.052	(0.563)	0.047	0.005
42	3.50	0.17	0.052	(0.560)	0.047	0.005
43	3.58	0.17	0.052	(0.558)	0.047	0.005
44	3.67	0.17	0.052	(0.556)	0.047	0.005
45	3.75	0.17	0.052	(0.553)	0.047	0.005
46	3.83	0.20	0.062	(0.551)	0.056	0.006
47	3.92	0.20	0.062	(0.549)	0.056	0.006
48	4.00	0.20	0.062	(0.546)	0.056	0.006
49	4.08	0.20	0.062	(0.544)	0.056	0.006
50	4.17	0.20	0.062	(0.542)	0.056	0.006
51	4.25	0.20	0.062	(0.539)	0.056	0.006
52	4.33	0.23	0.072	(0.537)	0.065	0.007
53	4.42	0.23	0.072	(0.535)	0.065	0.007
54	4.50	0.23	0.072	(0.532)	0.065	0.007
55	4.58	0.23	0.072	(0.530)	0.065	0.007
56	4.67	0.23	0.072	(0.528)	0.065	0.007
57	4.75	0.23	0.072	(0.526)	0.065	0.007
58	4.83	0.27	0.083	(0.523)	0.075	0.008
59	4.92	0.27	0.083	(0.521)	0.075	0.008
60	5.00	0.27	0.083	(0.519)	0.075	0.008
61	5.08	0.20	0.062	(0.516)	0.056	0.006
62	5.17	0.20	0.062	(0.514)	0.056	0.006
63	5.25	0.20	0.062	(0.512)	0.056	0.006
64	5.33	0.23	0.072	(0.510)	0.065	0.007
65	5.42	0.23	0.072	(0.508)	0.065	0.007
66	5.50	0.23	0.072	(0.505)	0.065	0.007
67	5.58	0.27	0.083	(0.503)	0.075	0.008
68	5.67	0.27	0.083	(0.501)	0.075	0.008
69	5.75	0.27	0.083	(0.499)	0.075	0.008
70	5.83	0.27	0.083	(0.496)	0.075	0.008
71	5.92	0.27	0.083	(0.494)	0.075	0.008
72	6.00	0.27	0.083	(0.492)	0.075	0.008
73	6.08	0.30	0.093	(0.490)	0.084	0.009

74	6.17	0.30	0.093	(0.488)	0.084	0.009
75	6.25	0.30	0.093	(0.486)	0.084	0.009
76	6.33	0.30	0.093	(0.483)	0.084	0.009
77	6.42	0.30	0.093	(0.481)	0.084	0.009
78	6.50	0.30	0.093	(0.479)	0.084	0.009
79	6.58	0.33	0.103	(0.477)	0.093	0.010
80	6.67	0.33	0.103	(0.475)	0.093	0.010
81	6.75	0.33	0.103	(0.473)	0.093	0.010
82	6.83	0.33	0.103	(0.470)	0.093	0.010
83	6.92	0.33	0.103	(0.468)	0.093	0.010
84	7.00	0.33	0.103	(0.466)	0.093	0.010
85	7.08	0.33	0.103	(0.464)	0.093	0.010
86	7.17	0.33	0.103	(0.462)	0.093	0.010
87	7.25	0.33	0.103	(0.460)	0.093	0.010
88	7.33	0.37	0.114	(0.458)	0.102	0.011
89	7.42	0.37	0.114	(0.456)	0.102	0.011
90	7.50	0.37	0.114	(0.454)	0.102	0.011
91	7.58	0.40	0.124	(0.452)	0.112	0.012
92	7.67	0.40	0.124	(0.449)	0.112	0.012
93	7.75	0.40	0.124	(0.447)	0.112	0.012
94	7.83	0.43	0.135	(0.445)	0.121	0.013
95	7.92	0.43	0.135	(0.443)	0.121	0.013
96	8.00	0.43	0.135	(0.441)	0.121	0.013
97	8.08	0.50	0.155	(0.439)	0.140	0.016
98	8.17	0.50	0.155	(0.437)	0.140	0.016
99	8.25	0.50	0.155	(0.435)	0.140	0.016
100	8.33	0.50	0.155	(0.433)	0.140	0.016
101	8.42	0.50	0.155	(0.431)	0.140	0.016
102	8.50	0.50	0.155	(0.429)	0.140	0.016
103	8.58	0.53	0.166	(0.427)	0.149	0.017
104	8.67	0.53	0.166	(0.425)	0.149	0.017
105	8.75	0.53	0.166	(0.423)	0.149	0.017
106	8.83	0.57	0.176	(0.421)	0.158	0.018
107	8.92	0.57	0.176	(0.419)	0.158	0.018
108	9.00	0.57	0.176	(0.417)	0.158	0.018
109	9.08	0.63	0.197	(0.415)	0.177	0.020
110	9.17	0.63	0.197	(0.413)	0.177	0.020
111	9.25	0.63	0.197	(0.411)	0.177	0.020
112	9.33	0.67	0.207	(0.409)	0.186	0.021
113	9.42	0.67	0.207	(0.407)	0.186	0.021
114	9.50	0.67	0.207	(0.405)	0.186	0.021
115	9.58	0.70	0.217	(0.403)	0.196	0.022
116	9.67	0.70	0.217	(0.401)	0.196	0.022
117	9.75	0.70	0.217	(0.399)	0.196	0.022
118	9.83	0.73	0.228	(0.398)	0.205	0.023
119	9.92	0.73	0.228	(0.396)	0.205	0.023
120	10.00	0.73	0.228	(0.394)	0.205	0.023
121	10.08	0.50	0.155	(0.392)	0.140	0.016
122	10.17	0.50	0.155	(0.390)	0.140	0.016
123	10.25	0.50	0.155	(0.388)	0.140	0.016
124	10.33	0.50	0.155	(0.386)	0.140	0.016
125	10.42	0.50	0.155	(0.384)	0.140	0.016
126	10.50	0.50	0.155	(0.382)	0.140	0.016
127	10.58	0.67	0.207	(0.380)	0.186	0.021
128	10.67	0.67	0.207	(0.379)	0.186	0.021
129	10.75	0.67	0.207	(0.377)	0.186	0.021
130	10.83	0.67	0.207	(0.375)	0.186	0.021
131	10.92	0.67	0.207	(0.373)	0.186	0.021
132	11.00	0.67	0.207	(0.371)	0.186	0.021
133	11.08	0.63	0.197	(0.369)	0.177	0.020
134	11.17	0.63	0.197	(0.368)	0.177	0.020
135	11.25	0.63	0.197	(0.366)	0.177	0.020
136	11.33	0.63	0.197	(0.364)	0.177	0.020
137	11.42	0.63	0.197	(0.362)	0.177	0.020
138	11.50	0.63	0.197	(0.360)	0.177	0.020
139	11.58	0.57	0.176	(0.359)	0.158	0.018
140	11.67	0.57	0.176	(0.357)	0.158	0.018
141	11.75	0.57	0.176	(0.355)	0.158	0.018
142	11.83	0.60	0.186	(0.353)	0.168	0.019
143	11.92	0.60	0.186	(0.352)	0.168	0.019
144	12.00	0.60	0.186	(0.350)	0.168	0.019
145	12.08	0.83	0.259	(0.348)	0.233	0.026
146	12.17	0.83	0.259	(0.346)	0.233	0.026
147	12.25	0.83	0.259	(0.345)	0.233	0.026
148	12.33	0.87	0.269	(0.343)	0.242	0.027
149	12.42	0.87	0.269	(0.341)	0.242	0.027
150	12.50	0.87	0.269	(0.339)	0.242	0.027
151	12.58	0.93	0.290	(0.338)	0.261	0.029
152	12.67	0.93	0.290	(0.336)	0.261	0.029
153	12.75	0.93	0.290	(0.334)	0.261	0.029
154	12.83	0.97	0.300	(0.333)	0.270	0.030
155	12.92	0.97	0.300	(0.331)	0.270	0.030
156	13.00	0.97	0.300	(0.329)	0.270	0.030
157	13.08	1.13	0.352	(0.328)	0.317	0.035
158	13.17	1.13	0.352	(0.326)	0.317	0.035
159	13.25	1.13	0.352	(0.324)	0.317	0.035
160	13.33	1.13	0.352	(0.323)	0.317	0.035

161	13.42	1.13	0.352	(0.321)	0.317	0.035
162	13.50	1.13	0.352	(0.319)	0.317	0.035
163	13.58	0.77	0.238	(0.318)	0.214	0.024
164	13.67	0.77	0.238	(0.316)	0.214	0.024
165	13.75	0.77	0.238	(0.314)	0.214	0.024
166	13.83	0.77	0.238	(0.313)	0.214	0.024
167	13.92	0.77	0.238	(0.311)	0.214	0.024
168	14.00	0.77	0.238	(0.310)	0.214	0.024
169	14.08	0.90	0.279	(0.308)	0.251	0.028
170	14.17	0.90	0.279	(0.307)	0.251	0.028
171	14.25	0.90	0.279	(0.305)	0.251	0.028
172	14.33	0.87	0.269	(0.303)	0.242	0.027
173	14.42	0.87	0.269	(0.302)	0.242	0.027
174	14.50	0.87	0.269	(0.300)	0.242	0.027
175	14.58	0.87	0.269	(0.299)	0.242	0.027
176	14.67	0.87	0.269	(0.297)	0.242	0.027
177	14.75	0.87	0.269	(0.296)	0.242	0.027
178	14.83	0.83	0.259	(0.294)	0.233	0.026
179	14.92	0.83	0.259	(0.293)	0.233	0.026
180	15.00	0.83	0.259	(0.291)	0.233	0.026
181	15.08	0.80	0.248	(0.290)	0.224	0.025
182	15.17	0.80	0.248	(0.288)	0.224	0.025
183	15.25	0.80	0.248	(0.287)	0.224	0.025
184	15.33	0.77	0.238	(0.285)	0.214	0.024
185	15.42	0.77	0.238	(0.284)	0.214	0.024
186	15.50	0.77	0.238	(0.282)	0.214	0.024
187	15.58	0.63	0.197	(0.281)	0.177	0.020
188	15.67	0.63	0.197	(0.279)	0.177	0.020
189	15.75	0.63	0.197	(0.278)	0.177	0.020
190	15.83	0.63	0.197	(0.277)	0.177	0.020
191	15.92	0.63	0.197	(0.275)	0.177	0.020
192	16.00	0.63	0.197	(0.274)	0.177	0.020
193	16.08	0.13	0.041	(0.272)	0.037	0.004
194	16.17	0.13	0.041	(0.271)	0.037	0.004
195	16.25	0.13	0.041	(0.270)	0.037	0.004
196	16.33	0.13	0.041	(0.268)	0.037	0.004
197	16.42	0.13	0.041	(0.267)	0.037	0.004
198	16.50	0.13	0.041	(0.265)	0.037	0.004
199	16.58	0.10	0.031	(0.264)	0.028	0.003
200	16.67	0.10	0.031	(0.263)	0.028	0.003
201	16.75	0.10	0.031	(0.261)	0.028	0.003
202	16.83	0.10	0.031	(0.260)	0.028	0.003
203	16.92	0.10	0.031	(0.259)	0.028	0.003
204	17.00	0.10	0.031	(0.258)	0.028	0.003
205	17.08	0.17	0.052	(0.256)	0.047	0.005
206	17.17	0.17	0.052	(0.255)	0.047	0.005
207	17.25	0.17	0.052	(0.254)	0.047	0.005
208	17.33	0.17	0.052	(0.252)	0.047	0.005
209	17.42	0.17	0.052	(0.251)	0.047	0.005
210	17.50	0.17	0.052	(0.250)	0.047	0.005
211	17.58	0.17	0.052	(0.249)	0.047	0.005
212	17.67	0.17	0.052	(0.247)	0.047	0.005
213	17.75	0.17	0.052	(0.246)	0.047	0.005
214	17.83	0.13	0.041	(0.245)	0.037	0.004
215	17.92	0.13	0.041	(0.244)	0.037	0.004
216	18.00	0.13	0.041	(0.242)	0.037	0.004
217	18.08	0.13	0.041	(0.241)	0.037	0.004
218	18.17	0.13	0.041	(0.240)	0.037	0.004
219	18.25	0.13	0.041	(0.239)	0.037	0.004
220	18.33	0.13	0.041	(0.238)	0.037	0.004
221	18.42	0.13	0.041	(0.237)	0.037	0.004
222	18.50	0.13	0.041	(0.235)	0.037	0.004
223	18.58	0.10	0.031	(0.234)	0.028	0.003
224	18.67	0.10	0.031	(0.233)	0.028	0.003
225	18.75	0.10	0.031	(0.232)	0.028	0.003
226	18.83	0.07	0.021	(0.231)	0.019	0.002
227	18.92	0.07	0.021	(0.230)	0.019	0.002
228	19.00	0.07	0.021	(0.229)	0.019	0.002
229	19.08	0.10	0.031	(0.228)	0.028	0.003
230	19.17	0.10	0.031	(0.227)	0.028	0.003
231	19.25	0.10	0.031	(0.226)	0.028	0.003
232	19.33	0.13	0.041	(0.225)	0.037	0.004
233	19.42	0.13	0.041	(0.223)	0.037	0.004
234	19.50	0.13	0.041	(0.222)	0.037	0.004
235	19.58	0.10	0.031	(0.221)	0.028	0.003
236	19.67	0.10	0.031	(0.220)	0.028	0.003
237	19.75	0.10	0.031	(0.219)	0.028	0.003
238	19.83	0.07	0.021	(0.218)	0.019	0.002
239	19.92	0.07	0.021	(0.217)	0.019	0.002
240	20.00	0.07	0.021	(0.216)	0.019	0.002
241	20.08	0.10	0.031	(0.216)	0.028	0.003
242	20.17	0.10	0.031	(0.215)	0.028	0.003
243	20.25	0.10	0.031	(0.214)	0.028	0.003
244	20.33	0.10	0.031	(0.213)	0.028	0.003
245	20.42	0.10	0.031	(0.212)	0.028	0.003
246	20.50	0.10	0.031	(0.211)	0.028	0.003
247	20.58	0.10	0.031	(0.210)	0.028	0.003

248	20.67	0.10	0.031	(0.209)	0.028	0.003
249	20.75	0.10	0.031	(0.208)	0.028	0.003
250	20.83	0.07	0.021	(0.207)	0.019	0.002
251	20.92	0.07	0.021	(0.207)	0.019	0.002
252	21.00	0.07	0.021	(0.206)	0.019	0.002
253	21.08	0.10	0.031	(0.205)	0.028	0.003
254	21.17	0.10	0.031	(0.204)	0.028	0.003
255	21.25	0.10	0.031	(0.203)	0.028	0.003
256	21.33	0.07	0.021	(0.203)	0.019	0.002
257	21.42	0.07	0.021	(0.202)	0.019	0.002
258	21.50	0.07	0.021	(0.201)	0.019	0.002
259	21.58	0.10	0.031	(0.200)	0.028	0.003
260	21.67	0.10	0.031	(0.200)	0.028	0.003
261	21.75	0.10	0.031	(0.199)	0.028	0.003
262	21.83	0.07	0.021	(0.198)	0.019	0.002
263	21.92	0.07	0.021	(0.198)	0.019	0.002
264	22.00	0.07	0.021	(0.197)	0.019	0.002
265	22.08	0.10	0.031	(0.196)	0.028	0.003
266	22.17	0.10	0.031	(0.196)	0.028	0.003
267	22.25	0.10	0.031	(0.195)	0.028	0.003
268	22.33	0.07	0.021	(0.194)	0.019	0.002
269	22.42	0.07	0.021	(0.194)	0.019	0.002
270	22.50	0.07	0.021	(0.193)	0.019	0.002
271	22.58	0.07	0.021	(0.193)	0.019	0.002
272	22.67	0.07	0.021	(0.192)	0.019	0.002
273	22.75	0.07	0.021	(0.192)	0.019	0.002
274	22.83	0.07	0.021	(0.191)	0.019	0.002
275	22.92	0.07	0.021	(0.191)	0.019	0.002
276	23.00	0.07	0.021	(0.190)	0.019	0.002
277	23.08	0.07	0.021	(0.190)	0.019	0.002
278	23.17	0.07	0.021	(0.189)	0.019	0.002
279	23.25	0.07	0.021	(0.189)	0.019	0.002
280	23.33	0.07	0.021	(0.188)	0.019	0.002
281	23.42	0.07	0.021	(0.188)	0.019	0.002
282	23.50	0.07	0.021	(0.188)	0.019	0.002
283	23.58	0.07	0.021	(0.187)	0.019	0.002
284	23.67	0.07	0.021	(0.187)	0.019	0.002
285	23.75	0.07	0.021	(0.187)	0.019	0.002
286	23.83	0.07	0.021	(0.187)	0.019	0.002
287	23.92	0.07	0.021	(0.187)	0.019	0.002
288	24.00	0.07	0.021	(0.186)	0.019	0.002

(Loss Rate Not Used)

Sum = 100.0 Sum = 3.1

Flood volume = Effective rainfall 0.26(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.2(Ac.Ft)
Total soil loss = 2.33(In)
Total soil loss = 1.558(Ac.Ft)
Total rainfall = 2.59(In)
Flood volume = 7541.8 Cubic Feet
Total soil loss = 67876.3 Cubic Feet

Peak flow rate of this hydrograph = 0.285(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	0.0000	0.01	Q	|	|	|	|
0+10	0.0001	0.01	Q	|	|	|	|
0+15	0.0002	0.02	Q	|	|	|	|
0+20	0.0004	0.02	Q	|	|	|	|
0+25	0.0005	0.02	Q	|	|	|	|
0+30	0.0007	0.02	Q	|	|	|	|
0+35	0.0009	0.02	Q	|	|	|	|
0+40	0.0011	0.03	Q	|	|	|	|
0+45	0.0012	0.03	Q	|	|	|	|
0+50	0.0014	0.03	Q	|	|	|	|
0+55	0.0016	0.03	Q	|	|	|	|
1+ 0	0.0019	0.03	Q	|	|	|	|
1+ 5	0.0021	0.03	Q	|	|	|	|
1+10	0.0023	0.03	Q	|	|	|	|
1+15	0.0024	0.03	Q	|	|	|	|
1+20	0.0026	0.03	Q	|	|	|	|
1+25	0.0028	0.03	Q	|	|	|	|
1+30	0.0030	0.03	Q	|	|	|	|
1+35	0.0031	0.03	Q	|	|	|	|
1+40	0.0033	0.03	Q	|	|	|	|
1+45	0.0035	0.03	Q	|	|	|	|
1+50	0.0037	0.03	Q	|	|	|	|
1+55	0.0039	0.03	Q	|	|	|	|
2+ 0	0.0041	0.03	Q	|	|	|	|
2+ 5	0.0044	0.03	QV	|	|	|	|

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2+10       0.0046      0.03  QV          |           |           |           |
2+15       0.0048      0.03  QV          |           |           |           |
2+20       0.0050      0.03  QV          |           |           |           |
2+25       0.0053      0.03  QV          |           |           |           |
2+30       0.0055      0.03  QV          |           |           |           |
2+35       0.0058      0.04  QV          |           |           |           |
2+40       0.0060      0.04  QV          |           |           |           |
2+45       0.0063      0.04  QV          |           |           |           |
2+50       0.0066      0.04  QV          |           |           |           |
2+55       0.0069      0.04  QV          |           |           |           |
3+ 0       0.0072      0.04  QV          |           |           |           |
3+ 5       0.0075      0.04  QV          |           |           |           |
3+10       0.0078      0.04  QV          |           |           |           |
3+15       0.0081      0.04  QV          |           |           |           |
3+20       0.0083      0.04  QV          |           |           |           |
3+25       0.0086      0.04  QV          |           |           |           |
3+30       0.0089      0.04  Q V         |           |           |           |
3+35       0.0092      0.04  Q V         |           |           |           |
3+40       0.0095      0.04  Q V         |           |           |           |
3+45       0.0098      0.04  Q V         |           |           |           |
3+50       0.0101      0.05  Q V         |           |           |           |
3+55       0.0104      0.05  Q V         |           |           |           |
4+ 0       0.0108      0.05  Q V         |           |           |           |
4+ 5       0.0111      0.05  Q V         |           |           |           |
4+10       0.0115      0.05  Q V         |           |           |           |
4+15       0.0118      0.05  Q V         |           |           |           |
4+20       0.0122      0.05  Q V         |           |           |           |
4+25       0.0126      0.06  Q V         |           |           |           |
4+30       0.0130      0.06  Q V         |           |           |           |
4+35       0.0134      0.06  Q  V        |           |           |           |
4+40       0.0138      0.06  Q  V        |           |           |           |
4+45       0.0142      0.06  Q  V        |           |           |           |
4+50       0.0146      0.06  Q  V        |           |           |           |
4+55       0.0151      0.07  Q  V        |           |           |           |
5+ 0       0.0155      0.07  Q  V        |           |           |           |
5+ 5       0.0159      0.06  Q  V        |           |           |           |
5+10       0.0163      0.05  Q  V        |           |           |           |
5+15       0.0167      0.05  Q  V        |           |           |           |
5+20       0.0170      0.05  Q  V        |           |           |           |
5+25       0.0174      0.06  Q   V       |           |           |           |
5+30       0.0178      0.06  Q   V       |           |           |           |
5+35       0.0182      0.06  Q   V       |           |           |           |
5+40       0.0187      0.07  Q   V       |           |           |           |
5+45       0.0192      0.07  Q   V       |           |           |           |
5+50       0.0196      0.07  Q   V       |           |           |           |
5+55       0.0201      0.07  Q   V       |           |           |           |
6+ 0       0.0205      0.07  Q   V       |           |           |           |
6+ 5       0.0210      0.07  Q   V       |           |           |           |
6+10       0.0215      0.07  Q   V       |           |           |           |
6+15       0.0220      0.07  Q    V      |           |           |           |
6+20       0.0226      0.08  Q    V      |           |           |           |
6+25       0.0231      0.08  Q    V      |           |           |           |
6+30       0.0236      0.08  Q    V      |           |           |           |
6+35       0.0241      0.08  Q    V      |           |           |           |
6+40       0.0247      0.08  Q    V      |           |           |           |
6+45       0.0253      0.08  Q    V      |           |           |           |
6+50       0.0259      0.08  Q    V      |           |           |           |
6+55       0.0264      0.08  Q     V     |           |           |           |
7+ 0       0.0270      0.08  Q     V     |           |           |           |
7+ 5       0.0276      0.08  Q     V     |           |           |           |
7+10       0.0282      0.08  Q     V     |           |           |           |
7+15       0.0287      0.08  Q     V     |           |           |           |
7+20       0.0293      0.09  Q     V     |           |           |           |
7+25       0.0300      0.09  Q     V     |           |           |           |
7+30       0.0306      0.09  Q      V    |           |           |           |
7+35       0.0313      0.10  Q      V    |           |           |           |
7+40       0.0319      0.10  Q      V    |           |           |           |
7+45       0.0326      0.10  Q      V    |           |           |           |
7+50       0.0333      0.10  Q      V    |           |           |           |
7+55       0.0341      0.11  Q      V    |           |           |           |
8+ 0       0.0348      0.11  Q       V   |           |           |           |
8+ 5       0.0356      0.11  Q       V   |           |           |           |
8+10       0.0365      0.12  Q       V   |           |           |           |
8+15       0.0373      0.12  Q       V   |           |           |           |
8+20       0.0382      0.13  Q       V   |           |           |           |
8+25       0.0390      0.13  Q        V  |           |           |           |
8+30       0.0399      0.13  Q        V  |           |           |           |
8+35       0.0408      0.13  Q        V  |           |           |           |
8+40       0.0417      0.13  Q        V  |           |           |           |
8+45       0.0426      0.13  Q        V  |           |           |           |
8+50       0.0436      0.14  Q         V |           |           |           |
8+55       0.0445      0.14  Q         V |           |           |           |
9+ 0       0.0455      0.14  Q         V |           |           |           |
9+ 5       0.0465      0.15  Q         V |           |           |           |
9+10       0.0476      0.16  Q          |V          |           |           |
9+15       0.0487      0.16  Q          |V          |           |           |
9+20       0.0498      0.16  Q          |V          |           |           |
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 9+25       0.0510      0.17  Q          |V          |          |          |
 9+30       0.0521      0.17  Q          | V         |          |          |
 9+35       0.0533      0.17  Q          | V         |          |          |
 9+40       0.0545      0.17  Q          | V         |          |          |
 9+45       0.0557      0.18  Q          | V         |          |          |
 9+50       0.0569      0.18  Q          |  V        |          |          |
 9+55       0.0582      0.18  Q          |  V        |          |          |
10+ 0       0.0595      0.18  Q          |  V        |          |          |
10+ 5       0.0606      0.16  Q          |  V        |          |          |
10+10       0.0615      0.14  Q          |   V       |          |          |
10+15       0.0624      0.13  Q          |   V       |          |          |
10+20       0.0633      0.13  Q          |   V       |          |          |
10+25       0.0642      0.13  Q          |   V       |          |          |
10+30       0.0650      0.13  Q          |    V      |          |          |
10+35       0.0660      0.14  Q          |    V      |          |          |
10+40       0.0671      0.16  Q          |    V      |          |          |
10+45       0.0682      0.16  Q          |    V      |          |          |
10+50       0.0694      0.17  Q          |     V     |          |          |
10+55       0.0705      0.17  Q          |     V     |          |          |
11+ 0       0.0717      0.17  Q          |     V     |          |          |
11+ 5       0.0728      0.16  Q          |     V     |          |          |
11+10       0.0739      0.16  Q          |      V    |          |          |
11+15       0.0750      0.16  Q          |      V    |          |          |
11+20       0.0761      0.16  Q          |      V    |          |          |
11+25       0.0772      0.16  Q          |      V    |          |          |
11+30       0.0783      0.16  Q          |       V   |          |          |
11+35       0.0794      0.15  Q          |       V   |          |          |
11+40       0.0804      0.15  Q          |       V   |          |          |
11+45       0.0814      0.14  Q          |       V   |          |          |
11+50       0.0824      0.15  Q          |        V  |          |          |
11+55       0.0834      0.15  Q          |        V  |          |          |
12+ 0       0.0844      0.15  Q          |        V  |          |          |
12+ 5       0.0856      0.17  Q          |        V  |          |          |
12+10       0.0870      0.20  Q          |         V |          |          |
12+15       0.0884      0.21  Q          |         V |          |          |
12+20       0.0899      0.21  Q          |         V |          |          |
12+25       0.0913      0.22  Q          |          V|          |          |
12+30       0.0928      0.22  Q          |          V|          |          |
12+35       0.0944      0.22  Q          |          V|          |          |
12+40       0.0960      0.23  Q          |           V          |          |
12+45       0.0976      0.23  Q          |           V          |          |
12+50       0.0992      0.24  Q          |           V          |          |
12+55       0.1009      0.24  Q          |            V         |          |
13+ 0       0.1026      0.24  Q          |            V         |          |
13+ 5       0.1043      0.26  |Q         |             V        |          |
13+10       0.1062      0.28  |Q         |             V        |          |
13+15       0.1082      0.28  |Q         |             V        |          |
13+20       0.1101      0.28  |Q         |              V       |          |
13+25       0.1121      0.28  |Q         |              V       |          |
13+30       0.1141      0.28  |Q         |               V      |          |
13+35       0.1158      0.25  |Q         |               V      |          |
13+40       0.1172      0.21  Q          |                V     |          |
13+45       0.1186      0.20  Q          |                V     |          |
13+50       0.1199      0.20  Q          |                V     |          |
13+55       0.1213      0.19  Q          |                 V    |          |
14+ 0       0.1226      0.19  Q          |                 V    |          |
14+ 5       0.1240      0.21  Q          |                 V    |          |
14+10       0.1255      0.22  Q          |                  V|          |
14+15       0.1271      0.22  Q          |                  V|          |
14+20       0.1286      0.22  Q          |                  V|          |
14+25       0.1301      0.22  Q          |                   V          |
14+30       0.1316      0.22  Q          |                   V          |
14+35       0.1331      0.22  Q          |                   V          |
14+40       0.1346      0.22  Q          |                    V         |
14+45       0.1361      0.22  Q          |                    V         |
14+50       0.1376      0.21  Q          |                    V         |
14+55       0.1391      0.21  Q          |                     V        |
15+ 0       0.1405      0.21  Q          |                     V        |
15+ 5       0.1419      0.21  Q          |                     V        |
15+10       0.1433      0.20  Q          |                      V       |
15+15       0.1447      0.20  Q          |                      V       |
15+20       0.1461      0.20  Q          |                      V       |
15+25       0.1474      0.19  Q          |                       V      |
15+30       0.1487      0.19  Q          |                       V      |
15+35       0.1500      0.18  Q          |                       V      |
15+40       0.1511      0.16  Q          |                       V      |
15+45       0.1522      0.16  Q          |                        V     |
15+50       0.1533      0.16  Q          |                        V     |
15+55       0.1544      0.16  Q          |                        V     |
16+ 0       0.1555      0.16  Q          |                        V     |
16+ 5       0.1563      0.11  Q          |                         V    |
16+10       0.1567      0.06  Q          |                         V    |
16+15       0.1570      0.04  Q          |                         V    |
16+20       0.1572      0.04  Q          |                         V    |
16+25       0.1575      0.03  Q          |                         V    |
16+30       0.1577      0.03  Q          |                         V    |
16+35       0.1579      0.03  Q          |                         V    |
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16+40	0.1581	0.03	Q	|	|	|	V |
16+45	0.1583	0.03	Q	|	|	|	V |
16+50	0.1584	0.03	Q	|	|	|	V |
16+55	0.1586	0.03	Q	|	|	|	V |
17+ 0	0.1588	0.03	Q	|	|	|	V |
17+ 5	0.1590	0.03	Q	|	|	|	V |
17+10	0.1593	0.04	Q	|	|	|	V |
17+15	0.1595	0.04	Q	|	|	|	V |
17+20	0.1598	0.04	Q	|	|	|	V |
17+25	0.1601	0.04	Q	|	|	|	V |
17+30	0.1604	0.04	Q	|	|	|	V |
17+35	0.1607	0.04	Q	|	|	|	V |
17+40	0.1610	0.04	Q	|	|	|	V |
17+45	0.1613	0.04	Q	|	|	|	V |
17+50	0.1615	0.04	Q	|	|	|	V |
17+55	0.1618	0.03	Q	|	|	|	V |
18+ 0	0.1620	0.03	Q	|	|	|	V |
18+ 5	0.1623	0.03	Q	|	|	|	V |
18+10	0.1625	0.03	Q	|	|	|	V |
18+15	0.1627	0.03	Q	|	|	|	V |
18+20	0.1629	0.03	Q	|	|	|	V |
18+25	0.1632	0.03	Q	|	|	|	V |
18+30	0.1634	0.03	Q	|	|	|	V |
18+35	0.1636	0.03	Q	|	|	|	V |
18+40	0.1638	0.03	Q	|	|	|	V |
18+45	0.1640	0.03	Q	|	|	|	V |
18+50	0.1641	0.02	Q	|	|	|	V |
18+55	0.1643	0.02	Q	|	|	|	V |
19+ 0	0.1644	0.02	Q	|	|	|	V |
19+ 5	0.1645	0.02	Q	|	|	|	V |
19+10	0.1647	0.02	Q	|	|	|	V |
19+15	0.1648	0.02	Q	|	|	|	V |
19+20	0.1650	0.03	Q	|	|	|	V |
19+25	0.1653	0.03	Q	|	|	|	V |
19+30	0.1655	0.03	Q	|	|	|	V |
19+35	0.1657	0.03	Q	|	|	|	V |
19+40	0.1659	0.03	Q	|	|	|	V |
19+45	0.1661	0.03	Q	|	|	|	V |
19+50	0.1662	0.02	Q	|	|	|	V |
19+55	0.1663	0.02	Q	|	|	|	V |
20+ 0	0.1665	0.02	Q	|	|	|	V |
20+ 5	0.1666	0.02	Q	|	|	|	V |
20+10	0.1668	0.02	Q	|	|	|	V |
20+15	0.1669	0.02	Q	|	|	|	V |
20+20	0.1671	0.02	Q	|	|	|	V |
20+25	0.1673	0.03	Q	|	|	|	V |
20+30	0.1674	0.03	Q	|	|	|	V |
20+35	0.1676	0.03	Q	|	|	|	V |
20+40	0.1678	0.03	Q	|	|	|	V |
20+45	0.1680	0.03	Q	|	|	|	V |
20+50	0.1681	0.02	Q	|	|	|	V |
20+55	0.1682	0.02	Q	|	|	|	V |
21+ 0	0.1684	0.02	Q	|	|	|	V |
21+ 5	0.1685	0.02	Q	|	|	|	V |
21+10	0.1687	0.02	Q	|	|	|	V |
21+15	0.1688	0.02	Q	|	|	|	V|
21+20	0.1690	0.02	Q	|	|	|	V|
21+25	0.1691	0.02	Q	|	|	|	V|
21+30	0.1692	0.02	Q	|	|	|	V|
21+35	0.1694	0.02	Q	|	|	|	V|
21+40	0.1695	0.02	Q	|	|	|	V|
21+45	0.1697	0.02	Q	|	|	|	V|
21+50	0.1698	0.02	Q	|	|	|	V|
21+55	0.1700	0.02	Q	|	|	|	V|
22+ 0	0.1701	0.02	Q	|	|	|	V|
22+ 5	0.1702	0.02	Q	|	|	|	V|
22+10	0.1704	0.02	Q	|	|	|	V|
22+15	0.1706	0.02	Q	|	|	|	V|
22+20	0.1707	0.02	Q	|	|	|	V|
22+25	0.1708	0.02	Q	|	|	|	V|
22+30	0.1710	0.02	Q	|	|	|	V|
22+35	0.1711	0.02	Q	|	|	|	V|
22+40	0.1712	0.02	Q	|	|	|	V|
22+45	0.1713	0.02	Q	|	|	|	V|
22+50	0.1714	0.02	Q	|	|	|	V|
22+55	0.1715	0.02	Q	|	|	|	V|
23+ 0	0.1716	0.02	Q	|	|	|	V|
23+ 5	0.1718	0.02	Q	|	|	|	V|
23+10	0.1719	0.02	Q	|	|	|	V|
23+15	0.1720	0.02	Q	|	|	|	V|
23+20	0.1721	0.02	Q	|	|	|	V|
23+25	0.1722	0.02	Q	|	|	|	V|
23+30	0.1723	0.02	Q	|	|	|	V|
23+35	0.1725	0.02	Q	|	|	|	V|
23+40	0.1726	0.02	Q	|	|	|	V|
23+45	0.1727	0.02	Q	|	|	|	V|
23+50	0.1728	0.02	Q	|	|	|	V|

```
   23+55       0.1729      0.02  Q          |          |          |         v|
   24+ 0       0.1730      0.02  Q          |          |          |         v|
   24+ 5       0.1731      0.01  Q          |          |          |         v|
   24+10       0.1731      0.00  Q          |          |          |         v|
   24+15       0.1731      0.00  Q          |          |          |         v|
   24+20       0.1731      0.00  Q          |          |          |          v
------------------------------------------------------------------------------
```

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

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Study date 06/06/22 File: EX1001100.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 609.00(Ft.)
Length along longest watercourse measured to centroid = 305.00(Ft.)
Length along longest watercourse = 0.115 Mi.
Length along longest watercourse measured to centroid = 0.058 Mi.
Difference in elevation = 6.50(Ft.)
Slope along watercourse = 56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.050 Hr.
Lag time = 2.99 Min.
25% of lag time = 0.75 Min.
40% of lag time = 1.20 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]
8.03	0.50	4.01

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	1.30	10.44

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 1.300(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.300(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	69.00	0.000

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	69.0	0.373	0.000	0.373	1.000	0.373
					Sum (F) =	0.373

Area averaged mean soil loss (F) (In/Hr) = 0.373
Minimum soil loss rate ((In/Hr)) = 0.186
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

Slope of intensity-duration curve for a 1 hour storm =0.5000

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	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	4.20	0.655	0.373	(0.590)	0.282
2	0.17	4.30	0.671	0.373	(0.604)	0.298
3	0.25	5.00	0.780	0.373	(0.702)	0.407
4	0.33	5.00	0.780	0.373	(0.702)	0.407
5	0.42	5.80	0.905	0.373	(0.814)	0.532
6	0.50	6.50	1.014	0.373	(0.913)	0.641
7	0.58	7.40	1.154	0.373	(1.039)	0.782
8	0.67	8.60	1.342	0.373	(1.207)	0.969
9	0.75	12.30	1.919	0.373	(1.727)	1.546
10	0.83	29.10	4.539	0.373	(4.085)	4.166
11	0.92	6.80	1.061	0.373	(0.955)	0.688
12	1.00	5.00	0.780	0.373	(0.702)	0.407
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.1

Flood volume = Effective rainfall 0.93(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.37(In)
Total soil loss = 0.249(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 27024.1 Cubic Feet
Total soil loss = 10866.7 Cubic Feet

Peak flow rate of this hydrograph = 19.450(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 5.0 10.0 15.0 20.0
0+ 5	0.0058	0.85	VQ
0+10	0.0192	1.94	V Q
0+15	0.0368	2.56	V Q
0+20	0.0580	3.08	V Q
0+25	0.0829	3.61	V Q
0+30	0.1134	4.44	VQ
0+35	0.1506	5.39	VQ
0+40	0.1961	6.61	VQ
0+45	0.2595	9.22	V Q
0+50	0.3935	19.45	V Q
0+55	0.5263	19.28	V Q
1+ 0	0.5813	7.98	Q V
1+ 5	0.6079	3.87	Q V
1+10	0.6178	1.44	Q V
1+15	0.6198	0.29	Q V
1+20	0.6204	0.08	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000	Sum= 8.093

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	0.281	(0.373)	0.253	0.028
2	0.17	1.30	0.281	(0.373)	0.253	0.028
3	0.25	1.10	0.238	(0.373)	0.214	0.024
4	0.33	1.50	0.324	(0.373)	0.292	0.032
5	0.42	1.50	0.324	(0.373)	0.292	0.032
6	0.50	1.80	0.389	(0.373)	0.350	0.039
7	0.58	1.50	0.324	(0.373)	0.292	0.032
8	0.67	1.80	0.389	(0.373)	0.350	0.039
9	0.75	1.80	0.389	(0.373)	0.350	0.039
10	0.83	1.50	0.324	(0.373)	0.292	0.032
11	0.92	1.60	0.346	(0.373)	0.311	0.035
12	1.00	1.80	0.389	(0.373)	0.350	0.039
13	1.08	2.20	0.475	0.373	(0.428)	0.102
14	1.17	2.20	0.475	0.373	(0.428)	0.102
15	1.25	2.20	0.475	0.373	(0.428)	0.102
16	1.33	2.00	0.432	0.373	(0.389)	0.059
17	1.42	2.60	0.562	0.373	(0.505)	0.189
18	1.50	2.70	0.583	0.373	(0.525)	0.210
19	1.58	2.40	0.518	0.373	(0.467)	0.146
20	1.67	2.70	0.583	0.373	(0.525)	0.210
21	1.75	3.30	0.713	0.373	(0.641)	0.340
22	1.83	3.10	0.670	0.373	(0.603)	0.297
23	1.92	2.90	0.626	0.373	(0.564)	0.254
24	2.00	3.00	0.648	0.373	(0.583)	0.275
25	2.08	3.10	0.670	0.373	(0.603)	0.297
26	2.17	4.20	0.907	0.373	(0.816)	0.534
27	2.25	5.00	1.080	0.373	(0.972)	0.707
28	2.33	3.50	0.756	0.373	(0.680)	0.383
29	2.42	6.80	1.469	0.373	(1.322)	1.096
30	2.50	7.30	1.577	0.373	(1.419)	1.204
31	2.58	8.20	1.771	0.373	(1.594)	1.398
32	2.67	5.90	1.274	0.373	(1.147)	0.902
33	2.75	2.00	0.432	0.373	(0.389)	0.059
34	2.83	1.80	0.389	(0.373)	0.350	0.039
35	2.92	1.80	0.389	(0.373)	0.350	0.039
36	3.00	0.60	0.130	(0.373)	0.117	0.013
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	9.4

Flood volume = Effective rainfall 0.78(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 1.02(In)
Total soil loss = 0.683(Ac.Ft)
Total rainfall = 1.80(In)
Flood volume = 22730.6 Cubic Feet
Total soil loss = 29735.6 Cubic Feet

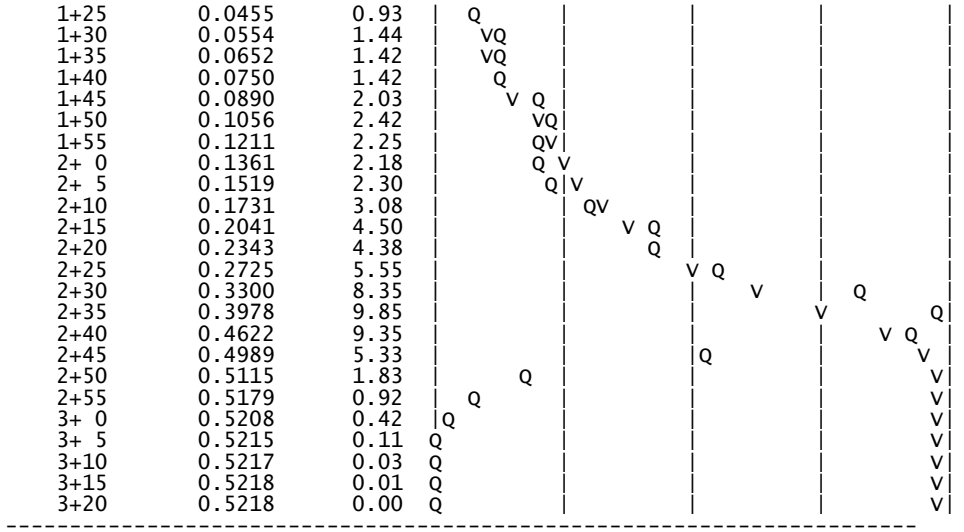
Peak flow rate of this hydrograph = 9.850(CFS)

++

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	2.5	5.0	7.5	10.0
0+ 5	0.0006	0.08	Q				
0+10	0.0019	0.19	Q				
0+15	0.0032	0.20	Q				
0+20	0.0048	0.22	Q				
0+25	0.0065	0.25	VQ				
0+30	0.0084	0.28	VQ				
0+35	0.0104	0.28	VQ				
0+40	0.0123	0.29	VQ				
0+45	0.0145	0.31	|Q				
0+50	0.0165	0.29	|Q				
0+55	0.0184	0.28	|Q				
1+ 0	0.0204	0.29	|Q				
1+ 5	0.0238	0.50	|Q				
1+10	0.0289	0.74	| Q				
1+15	0.0344	0.79	| VQ				
1+20	0.0391	0.69	| Q				


1+25 0.0455 0.93
1+30 0.0554 1.44
1+35 0.0652 1.42
1+40 0.0750 1.42
1+45 0.0890 2.03
1+50 0.1056 2.42
1+55 0.1211 2.25
2+ 0 0.1361 2.18
2+ 5 0.1519 2.30
2+10 0.1731 3.08
2+15 0.2041 4.50
2+20 0.2343 4.38
2+25 0.2725 5.55
2+30 0.3300 8.35
2+35 0.3978 9.85
2+40 0.4622 9.35
2+45 0.4989 5.33
2+50 0.5115 1.83
2+55 0.5179 0.92
3+ 0 0.5208 0.42
3+ 5 0.5215 0.11
3+10 0.5217 0.03
3+15 0.5218 0.01
3+20 0.5218 0.00

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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  06/06/22 File: EX1006100.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     609.00(Ft.)
Length along longest watercourse measured to centroid =     305.00(Ft.)
Length along longest watercourse =      0.115 Mi.
Length along longest watercourse measured to centroid =      0.058 Mi.
Difference in elevation =       6.50(Ft.)
Slope along watercourse =     56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time =    0.050 Hr.
Lag time =     2.99 Min.
25% of lag time =     0.75 Min.
40% of lag time =     1.20 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    2.500(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.500(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           69.00          0.000
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
69.0  69.0      0.373     0.000        0.373       1.000      0.373
                                                 Sum (F) =   0.373
Area averaged mean soil loss (F) (In/Hr) =  0.373
Minimum soil loss rate ((In/Hr)) =  0.186
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	167.177	37.089	3.002
2	0.167	334.354	45.727	3.701
3	0.250	501.531	10.276	0.832
4	0.333	668.708	4.352	0.352
5	0.417	835.884	2.557	0.207
			Sum = 100.000 Sum=	8.093

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	(0.373)	0.135	0.015
2	0.17	0.60	0.180	(0.373)	0.162	0.018
3	0.25	0.60	0.180	(0.373)	0.162	0.018
4	0.33	0.60	0.180	(0.373)	0.162	0.018
5	0.42	0.60	0.180	(0.373)	0.162	0.018
6	0.50	0.70	0.210	(0.373)	0.189	0.021
7	0.58	0.70	0.210	(0.373)	0.189	0.021
8	0.67	0.70	0.210	(0.373)	0.189	0.021
9	0.75	0.70	0.210	(0.373)	0.189	0.021
10	0.83	0.70	0.210	(0.373)	0.189	0.021
11	0.92	0.70	0.210	(0.373)	0.189	0.021
12	1.00	0.80	0.240	(0.373)	0.216	0.024
13	1.08	0.80	0.240	(0.373)	0.216	0.024
14	1.17	0.80	0.240	(0.373)	0.216	0.024
15	1.25	0.80	0.240	(0.373)	0.216	0.024
16	1.33	0.80	0.240	(0.373)	0.216	0.024
17	1.42	0.80	0.240	(0.373)	0.216	0.024
18	1.50	0.80	0.240	(0.373)	0.216	0.024
19	1.58	0.80	0.240	(0.373)	0.216	0.024
20	1.67	0.80	0.240	(0.373)	0.216	0.024
21	1.75	0.80	0.240	(0.373)	0.216	0.024
22	1.83	0.80	0.240	(0.373)	0.216	0.024
23	1.92	0.80	0.240	(0.373)	0.216	0.024
24	2.00	0.90	0.270	(0.373)	0.243	0.027
25	2.08	0.80	0.240	(0.373)	0.216	0.024
26	2.17	0.90	0.270	(0.373)	0.243	0.027
27	2.25	0.90	0.270	(0.373)	0.243	0.027
28	2.33	0.90	0.270	(0.373)	0.243	0.027
29	2.42	0.90	0.270	(0.373)	0.243	0.027
30	2.50	0.90	0.270	(0.373)	0.243	0.027
31	2.58	0.90	0.270	(0.373)	0.243	0.027
32	2.67	0.90	0.270	(0.373)	0.243	0.027
33	2.75	1.00	0.300	(0.373)	0.270	0.030
34	2.83	1.00	0.300	(0.373)	0.270	0.030
35	2.92	1.00	0.300	(0.373)	0.270	0.030
36	3.00	1.00	0.300	(0.373)	0.270	0.030
37	3.08	1.00	0.300	(0.373)	0.270	0.030
38	3.17	1.10	0.330	(0.373)	0.297	0.033
39	3.25	1.10	0.330	(0.373)	0.297	0.033
40	3.33	1.10	0.330	(0.373)	0.297	0.033
41	3.42	1.20	0.360	(0.373)	0.324	0.036
42	3.50	1.30	0.390	(0.373)	0.351	0.039
43	3.58	1.40	0.420	0.373	(0.378)	0.047
44	3.67	1.40	0.420	0.373	(0.378)	0.047
45	3.75	1.50	0.450	0.373	(0.405)	0.077
46	3.83	1.50	0.450	0.373	(0.405)	0.077
47	3.92	1.60	0.480	0.373	(0.432)	0.107
48	4.00	1.60	0.480	0.373	(0.432)	0.107
49	4.08	1.70	0.510	0.373	(0.459)	0.137
50	4.17	1.80	0.540	0.373	(0.486)	0.167
51	4.25	1.90	0.570	0.373	(0.513)	0.197
52	4.33	2.00	0.600	0.373	(0.540)	0.227
53	4.42	2.10	0.630	0.373	(0.567)	0.257
54	4.50	2.10	0.630	0.373	(0.567)	0.257
55	4.58	2.20	0.660	0.373	(0.594)	0.287
56	4.67	2.30	0.690	0.373	(0.621)	0.317
57	4.75	2.40	0.720	0.373	(0.648)	0.347
58	4.83	2.40	0.720	0.373	(0.648)	0.347
59	4.92	2.50	0.750	0.373	(0.675)	0.377
60	5.00	2.60	0.780	0.373	(0.702)	0.407
61	5.08	3.10	0.930	0.373	(0.837)	0.557
62	5.17	3.60	1.080	0.373	(0.972)	0.707
63	5.25	3.90	1.170	0.373	(1.053)	0.797
64	5.33	4.20	1.260	0.373	(1.134)	0.887
65	5.42	4.70	1.410	0.373	(1.269)	1.037
66	5.50	5.60	1.680	0.373	(1.512)	1.307
67	5.58	1.90	0.570	0.373	(0.513)	0.197
68	5.67	0.90	0.270	(0.373)	0.243	0.027
69	5.75	0.60	0.180	(0.373)	0.162	0.018
70	5.83	0.50	0.150	(0.373)	0.135	0.015
71	5.92	0.30	0.090	(0.373)	0.081	0.009
72	6.00	0.20	0.060	(0.373)	0.054	0.006
		(Loss Rate Not Used)				

```
 Sum =     100.0                                    Sum =    10.4
    Flood volume = Effective rainfall      0.87(In)
     times area       8.0(Ac.)/[(In)/(Ft.)] =       0.6(Ac.Ft)
    Total soil loss =      1.63(In)
    Total soil loss =     1.092(Ac.Ft)
    Total rainfall =      2.50(In)
    Flood volume =       25309.6 Cubic Feet
    Total soil loss =       47560.6 Cubic Feet
    ---------------------------------------------------------------------
     Peak flow rate of this hydrograph =      8.931(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        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------
  0+ 5       0.0003      0.05  Q          |         |         |         |
  0+10       0.0011      0.11  Q          |         |         |         |
  0+15       0.0020      0.13  Q          |         |         |         |
  0+20       0.0030      0.14  Q          |         |         |         |
  0+25       0.0040      0.15  Q          |         |         |         |
  0+30       0.0050      0.15  Q          |         |         |         |
  0+35       0.0062      0.17  Q          |         |         |         |
  0+40       0.0073      0.17  Q          |         |         |         |
  0+45       0.0085      0.17  Q          |         |         |         |
  0+50       0.0097      0.17  Q          |         |         |         |
  0+55       0.0108      0.17  Q          |         |         |         |
  1+ 0       0.0121      0.18  Q          |         |         |         |
  1+ 5       0.0134      0.19  Q          |         |         |         |
  1+10       0.0147      0.19  QV         |         |         |         |
  1+15       0.0160      0.19  QV         |         |         |         |
  1+20       0.0174      0.19  QV         |         |         |         |
  1+25       0.0187      0.19  QV         |         |         |         |
  1+30       0.0200      0.19  QV         |         |         |         |
  1+35       0.0214      0.19  QV         |         |         |         |
  1+40       0.0227      0.19  QV         |         |         |         |
  1+45       0.0241      0.19  QV         |         |         |         |
  1+50       0.0254      0.19  QV         |         |         |         |
  1+55       0.0267      0.19  QV         |         |         |         |
  2+ 0       0.0281      0.20  QV         |         |         |         |
  2+ 5       0.0296      0.21  Q V        |         |         |         |
  2+10       0.0310      0.21  Q V        |         |         |         |
  2+15       0.0325      0.22  Q V        |         |         |         |
  2+20       0.0340      0.22  Q V        |         |         |         |
  2+25       0.0355      0.22  Q V        |         |         |         |
  2+30       0.0370      0.22  Q V        |         |         |         |
  2+35       0.0385      0.22  Q V        |         |         |         |
  2+40       0.0400      0.22  Q V        |         |         |         |
  2+45       0.0415      0.23  Q V        |         |         |         |
  2+50       0.0432      0.24  Q V        |         |         |         |
  2+55       0.0448      0.24  Q  V       |         |         |         |
  3+ 0       0.0465      0.24  Q  V       |         |         |         |
  3+ 5       0.0482      0.24  Q  V       |         |         |         |
  3+10       0.0499      0.25  |Q V       |         |         |         |
  3+15       0.0517      0.26  |Q V       |         |         |         |
  3+20       0.0536      0.27  |Q V       |         |         |         |
  3+25       0.0555      0.28  |Q V       |         |         |         |
  3+30       0.0575      0.30  |Q V       |         |         |         |
  3+35       0.0598      0.33  |Q  V       |         |         |         |
  3+40       0.0623      0.37  |Q  V       |         |         |         |
  3+45       0.0656      0.47  |Q  V       |         |         |         |
  3+50       0.0696      0.58  | Q V       |         |         |         |
  3+55       0.0744      0.70  | Q  V      |         |         |         |
  4+ 0       0.0800      0.82  |  Q V      |         |         |         |
  4+ 5       0.0865      0.94  |  Q V      |         |         |         |
  4+10       0.0944      1.15  |   Q V     |         |         |         |
  4+15       0.1040      1.39  |    Q V    |         |         |         |
  4+20       0.1152      1.62  |     QV    |         |         |         |
  4+25       0.1280      1.86  |      QV   |         |         |         |
  4+30       0.1419      2.02  |       QV  |         |         |         |
  4+35       0.1567      2.15  |       Q V |         |         |         |
  4+40       0.1730      2.37  |        Q|V         |         |         |
  4+45       0.1909      2.60  |         Q  V       |         |         |
  4+50       0.2098      2.75  |         Q   V      |         |         |
  4+55       0.2296      2.88  |         |Q   V     |         |         |
  5+ 0       0.2510      3.10  |         | Q    V   |         |         |
  5+ 5       0.2764      3.69  |         |   Q    V|         |         |
  5+10       0.3089      4.73  |         |       Q |V        |         |
  5+15       0.3482      5.70  |         |         | QV      |         |
  5+20       0.3928      6.48  |         |         |   Q V   |         |
  5+25       0.4440      7.43  |         |         |       QV|         |
  5+30       0.5055      8.93  |         |         |         |  VQ     |
  5+35       0.5521      6.77  |         |         |      Q  |      V  |
```

```
    5+40       0.5690      2.45  |         Q|          |          |         v|
    5+45       0.5758      0.99  |   Q      |          |          |         v|
    5+50       0.5791      0.47  |Q         |          |          |         v|
    5+55       0.5801      0.15  Q          |          |          |         v|
    6+ 0       0.5806      0.08  Q          |          |          |         v|
    6+ 5       0.5809      0.04  Q          |          |          |         v|
    6+10       0.5810      0.01  Q          |          |          |         v|
    6+15       0.5810      0.00  Q          |          |          |         v|
    6+20       0.5810      0.00  Q          |          |          |         v|
-------------------------------------------------------------------------------
```

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

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Study date 06/06/22 File: EX10024100.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 609.00(Ft.)
Length along longest watercourse measured to centroid = 305.00(Ft.)
Length along longest watercourse = 0.115 Mi.
Length along longest watercourse measured to centroid = 0.058 Mi.
Difference in elevation = 6.50(Ft.)
Slope along watercourse = 56.3547 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.050 Hr.
Lag time = 2.99 Min.
25% of lag time = 0.75 Min.
40% of lag time = 1.20 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]
8.03	1.60	12.85

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	4.00	32.12

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	69.00	0.000

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	69.0	0.373	0.000	0.373	1.000	0.373
					Sum (F) =	0.373

Area averaged mean soil loss (F) (In/Hr) = 0.373
Minimum soil loss rate ((In/Hr)) = 0.186
(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	167.177	37.089		3.002
2	0.167	334.354	45.727		3.701
3	0.250	501.531	10.276		0.832
4	0.333	668.708	4.352		0.352
5	0.417	835.884	2.557		0.207
			Sum = 100.000	Sum=	8.093

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	0.032	(0.661)	0.029	0.003
2	0.17	0.07	0.032	(0.658)	0.029	0.003
3	0.25	0.07	0.032	(0.656)	0.029	0.003
4	0.33	0.10	0.048	(0.653)	0.043	0.005
5	0.42	0.10	0.048	(0.651)	0.043	0.005
6	0.50	0.10	0.048	(0.648)	0.043	0.005
7	0.58	0.10	0.048	(0.646)	0.043	0.005
8	0.67	0.10	0.048	(0.643)	0.043	0.005
9	0.75	0.10	0.048	(0.641)	0.043	0.005
10	0.83	0.13	0.064	(0.638)	0.058	0.006
11	0.92	0.13	0.064	(0.636)	0.058	0.006
12	1.00	0.13	0.064	(0.633)	0.058	0.006
13	1.08	0.10	0.048	(0.631)	0.043	0.005
14	1.17	0.10	0.048	(0.628)	0.043	0.005
15	1.25	0.10	0.048	(0.626)	0.043	0.005
16	1.33	0.10	0.048	(0.623)	0.043	0.005
17	1.42	0.10	0.048	(0.621)	0.043	0.005
18	1.50	0.10	0.048	(0.618)	0.043	0.005
19	1.58	0.10	0.048	(0.616)	0.043	0.005
20	1.67	0.10	0.048	(0.613)	0.043	0.005
21	1.75	0.10	0.048	(0.611)	0.043	0.005
22	1.83	0.13	0.064	(0.608)	0.058	0.006
23	1.92	0.13	0.064	(0.606)	0.058	0.006
24	2.00	0.13	0.064	(0.603)	0.058	0.006
25	2.08	0.13	0.064	(0.601)	0.058	0.006
26	2.17	0.13	0.064	(0.598)	0.058	0.006
27	2.25	0.13	0.064	(0.596)	0.058	0.006
28	2.33	0.13	0.064	(0.594)	0.058	0.006
29	2.42	0.13	0.064	(0.591)	0.058	0.006
30	2.50	0.13	0.064	(0.589)	0.058	0.006
31	2.58	0.17	0.080	(0.586)	0.072	0.008
32	2.67	0.17	0.080	(0.584)	0.072	0.008
33	2.75	0.17	0.080	(0.582)	0.072	0.008
34	2.83	0.17	0.080	(0.579)	0.072	0.008
35	2.92	0.17	0.080	(0.577)	0.072	0.008
36	3.00	0.17	0.080	(0.574)	0.072	0.008
37	3.08	0.17	0.080	(0.572)	0.072	0.008
38	3.17	0.17	0.080	(0.570)	0.072	0.008
39	3.25	0.17	0.080	(0.567)	0.072	0.008
40	3.33	0.17	0.080	(0.565)	0.072	0.008
41	3.42	0.17	0.080	(0.563)	0.072	0.008
42	3.50	0.17	0.080	(0.560)	0.072	0.008
43	3.58	0.17	0.080	(0.558)	0.072	0.008
44	3.67	0.17	0.080	(0.556)	0.072	0.008
45	3.75	0.17	0.080	(0.553)	0.072	0.008
46	3.83	0.20	0.096	(0.551)	0.086	0.010
47	3.92	0.20	0.096	(0.549)	0.086	0.010
48	4.00	0.20	0.096	(0.546)	0.086	0.010
49	4.08	0.20	0.096	(0.544)	0.086	0.010
50	4.17	0.20	0.096	(0.542)	0.086	0.010
51	4.25	0.20	0.096	(0.539)	0.086	0.010
52	4.33	0.23	0.112	(0.537)	0.101	0.011
53	4.42	0.23	0.112	(0.535)	0.101	0.011
54	4.50	0.23	0.112	(0.532)	0.101	0.011
55	4.58	0.23	0.112	(0.530)	0.101	0.011
56	4.67	0.23	0.112	(0.528)	0.101	0.011
57	4.75	0.23	0.112	(0.526)	0.101	0.011
58	4.83	0.27	0.128	(0.523)	0.115	0.013
59	4.92	0.27	0.128	(0.521)	0.115	0.013
60	5.00	0.27	0.128	(0.519)	0.115	0.013
61	5.08	0.20	0.096	(0.516)	0.086	0.010
62	5.17	0.20	0.096	(0.514)	0.086	0.010
63	5.25	0.20	0.096	(0.512)	0.086	0.010
64	5.33	0.23	0.112	(0.510)	0.101	0.011
65	5.42	0.23	0.112	(0.508)	0.101	0.011
66	5.50	0.23	0.112	(0.505)	0.101	0.011
67	5.58	0.27	0.128	(0.503)	0.115	0.013
68	5.67	0.27	0.128	(0.501)	0.115	0.013
69	5.75	0.27	0.128	(0.499)	0.115	0.013
70	5.83	0.27	0.128	(0.496)	0.115	0.013
71	5.92	0.27	0.128	(0.494)	0.115	0.013
72	6.00	0.27	0.128	(0.492)	0.115	0.013
73	6.08	0.30	0.144	(0.490)	0.130	0.014

74	6.17	0.30	0.144	(0.488)	0.130	0.014
75	6.25	0.30	0.144	(0.486)	0.130	0.014
76	6.33	0.30	0.144	(0.483)	0.130	0.014
77	6.42	0.30	0.144	(0.481)	0.130	0.014
78	6.50	0.30	0.144	(0.479)	0.130	0.014
79	6.58	0.33	0.160	(0.477)	0.144	0.016
80	6.67	0.33	0.160	(0.475)	0.144	0.016
81	6.75	0.33	0.160	(0.473)	0.144	0.016
82	6.83	0.33	0.160	(0.470)	0.144	0.016
83	6.92	0.33	0.160	(0.468)	0.144	0.016
84	7.00	0.33	0.160	(0.466)	0.144	0.016
85	7.08	0.33	0.160	(0.464)	0.144	0.016
86	7.17	0.33	0.160	(0.462)	0.144	0.016
87	7.25	0.33	0.160	(0.460)	0.144	0.016
88	7.33	0.37	0.176	(0.458)	0.158	0.018
89	7.42	0.37	0.176	(0.456)	0.158	0.018
90	7.50	0.37	0.176	(0.454)	0.158	0.018
91	7.58	0.40	0.192	(0.452)	0.173	0.019
92	7.67	0.40	0.192	(0.449)	0.173	0.019
93	7.75	0.40	0.192	(0.447)	0.173	0.019
94	7.83	0.43	0.208	(0.445)	0.187	0.021
95	7.92	0.43	0.208	(0.443)	0.187	0.021
96	8.00	0.43	0.208	(0.441)	0.187	0.021
97	8.08	0.50	0.240	(0.439)	0.216	0.024
98	8.17	0.50	0.240	(0.437)	0.216	0.024
99	8.25	0.50	0.240	(0.435)	0.216	0.024
100	8.33	0.50	0.240	(0.433)	0.216	0.024
101	8.42	0.50	0.240	(0.431)	0.216	0.024
102	8.50	0.50	0.240	(0.429)	0.216	0.024
103	8.58	0.53	0.256	(0.427)	0.230	0.026
104	8.67	0.53	0.256	(0.425)	0.230	0.026
105	8.75	0.53	0.256	(0.423)	0.230	0.026
106	8.83	0.57	0.272	(0.421)	0.245	0.027
107	8.92	0.57	0.272	(0.419)	0.245	0.027
108	9.00	0.57	0.272	(0.417)	0.245	0.027
109	9.08	0.63	0.304	(0.415)	0.274	0.030
110	9.17	0.63	0.304	(0.413)	0.274	0.030
111	9.25	0.63	0.304	(0.411)	0.274	0.030
112	9.33	0.67	0.320	(0.409)	0.288	0.032
113	9.42	0.67	0.320	(0.407)	0.288	0.032
114	9.50	0.67	0.320	(0.405)	0.288	0.032
115	9.58	0.70	0.336	(0.403)	0.302	0.034
116	9.67	0.70	0.336	(0.401)	0.302	0.034
117	9.75	0.70	0.336	(0.399)	0.302	0.034
118	9.83	0.73	0.352	(0.398)	0.317	0.035
119	9.92	0.73	0.352	(0.396)	0.317	0.035
120	10.00	0.73	0.352	(0.394)	0.317	0.035
121	10.08	0.50	0.240	(0.392)	0.216	0.024
122	10.17	0.50	0.240	(0.390)	0.216	0.024
123	10.25	0.50	0.240	(0.388)	0.216	0.024
124	10.33	0.50	0.240	(0.386)	0.216	0.024
125	10.42	0.50	0.240	(0.384)	0.216	0.024
126	10.50	0.50	0.240	(0.382)	0.216	0.024
127	10.58	0.67	0.320	(0.380)	0.288	0.032
128	10.67	0.67	0.320	(0.379)	0.288	0.032
129	10.75	0.67	0.320	(0.377)	0.288	0.032
130	10.83	0.67	0.320	(0.375)	0.288	0.032
131	10.92	0.67	0.320	(0.373)	0.288	0.032
132	11.00	0.67	0.320	(0.371)	0.288	0.032
133	11.08	0.63	0.304	(0.369)	0.274	0.030
134	11.17	0.63	0.304	(0.368)	0.274	0.030
135	11.25	0.63	0.304	(0.366)	0.274	0.030
136	11.33	0.63	0.304	(0.364)	0.274	0.030
137	11.42	0.63	0.304	(0.362)	0.274	0.030
138	11.50	0.63	0.304	(0.360)	0.274	0.030
139	11.58	0.57	0.272	(0.359)	0.245	0.027
140	11.67	0.57	0.272	(0.357)	0.245	0.027
141	11.75	0.57	0.272	(0.355)	0.245	0.027
142	11.83	0.60	0.288	(0.353)	0.259	0.029
143	11.92	0.60	0.288	(0.352)	0.259	0.029
144	12.00	0.60	0.288	(0.350)	0.259	0.029
145	12.08	0.83	0.400	0.348	(0.360)	0.052
146	12.17	0.83	0.400	0.346	(0.360)	0.054
147	12.25	0.83	0.400	0.345	(0.360)	0.055
148	12.33	0.87	0.416	0.343	(0.374)	0.073
149	12.42	0.87	0.416	0.341	(0.374)	0.075
150	12.50	0.87	0.416	0.339	(0.374)	0.077
151	12.58	0.93	0.448	0.338	(0.403)	0.110
152	12.67	0.93	0.448	0.336	(0.403)	0.112
153	12.75	0.93	0.448	0.334	(0.403)	0.114
154	12.83	0.97	0.464	0.333	(0.418)	0.131
155	12.92	0.97	0.464	0.331	(0.418)	0.133
156	13.00	0.97	0.464	0.329	(0.418)	0.135
157	13.08	1.13	0.544	0.328	(0.490)	0.216
158	13.17	1.13	0.544	0.326	(0.490)	0.218
159	13.25	1.13	0.544	0.324	(0.490)	0.220
160	13.33	1.13	0.544	0.323	(0.490)	0.221

161	13.42	1.13	0.544	0.321	(0.490)	0.223
162	13.50	1.13	0.544	0.319	(0.490)	0.225
163	13.58	0.77	0.368	0.318	(0.331)	0.050
164	13.67	0.77	0.368	0.316	(0.331)	0.052
165	13.75	0.77	0.368	0.314	(0.331)	0.054
166	13.83	0.77	0.368	0.313	(0.331)	0.055
167	13.92	0.77	0.368	0.311	(0.331)	0.057
168	14.00	0.77	0.368	0.310	(0.331)	0.058
169	14.08	0.90	0.432	0.308	(0.389)	0.124
170	14.17	0.90	0.432	0.307	(0.389)	0.125
171	14.25	0.90	0.432	0.305	(0.389)	0.127
172	14.33	0.87	0.416	0.303	(0.374)	0.113
173	14.42	0.87	0.416	0.302	(0.374)	0.114
174	14.50	0.87	0.416	0.300	(0.374)	0.116
175	14.58	0.87	0.416	0.299	(0.374)	0.117
176	14.67	0.87	0.416	0.297	(0.374)	0.119
177	14.75	0.87	0.416	0.296	(0.374)	0.120
178	14.83	0.83	0.400	0.294	(0.360)	0.106
179	14.92	0.83	0.400	0.293	(0.360)	0.107
180	15.00	0.83	0.400	0.291	(0.360)	0.109
181	15.08	0.80	0.384	0.290	(0.346)	0.094
182	15.17	0.80	0.384	0.288	(0.346)	0.096
183	15.25	0.80	0.384	0.287	(0.346)	0.097
184	15.33	0.77	0.368	0.285	(0.331)	0.083
185	15.42	0.77	0.368	0.284	(0.331)	0.084
186	15.50	0.77	0.368	0.282	(0.331)	0.086
187	15.58	0.63	0.304	(0.281)	0.274	0.030
188	15.67	0.63	0.304	(0.279)	0.274	0.030
189	15.75	0.63	0.304	(0.278)	0.274	0.030
190	15.83	0.63	0.304	(0.277)	0.274	0.030
191	15.92	0.63	0.304	(0.275)	0.274	0.030
192	16.00	0.63	0.304	(0.274)	0.274	0.030
193	16.08	0.13	0.064	(0.272)	0.058	0.006
194	16.17	0.13	0.064	(0.271)	0.058	0.006
195	16.25	0.13	0.064	(0.270)	0.058	0.006
196	16.33	0.13	0.064	(0.268)	0.058	0.006
197	16.42	0.13	0.064	(0.267)	0.058	0.006
198	16.50	0.13	0.064	(0.265)	0.058	0.006
199	16.58	0.10	0.048	(0.264)	0.043	0.005
200	16.67	0.10	0.048	(0.263)	0.043	0.005
201	16.75	0.10	0.048	(0.261)	0.043	0.005
202	16.83	0.10	0.048	(0.260)	0.043	0.005
203	16.92	0.10	0.048	(0.259)	0.043	0.005
204	17.00	0.10	0.048	(0.258)	0.043	0.005
205	17.08	0.17	0.080	(0.256)	0.072	0.008
206	17.17	0.17	0.080	(0.255)	0.072	0.008
207	17.25	0.17	0.080	(0.254)	0.072	0.008
208	17.33	0.17	0.080	(0.252)	0.072	0.008
209	17.42	0.17	0.080	(0.251)	0.072	0.008
210	17.50	0.17	0.080	(0.250)	0.072	0.008
211	17.58	0.17	0.080	(0.249)	0.072	0.008
212	17.67	0.17	0.080	(0.247)	0.072	0.008
213	17.75	0.17	0.080	(0.246)	0.072	0.008
214	17.83	0.13	0.064	(0.245)	0.058	0.006
215	17.92	0.13	0.064	(0.244)	0.058	0.006
216	18.00	0.13	0.064	(0.242)	0.058	0.006
217	18.08	0.13	0.064	(0.241)	0.058	0.006
218	18.17	0.13	0.064	(0.240)	0.058	0.006
219	18.25	0.13	0.064	(0.239)	0.058	0.006
220	18.33	0.13	0.064	(0.238)	0.058	0.006
221	18.42	0.13	0.064	(0.237)	0.058	0.006
222	18.50	0.13	0.064	(0.235)	0.058	0.006
223	18.58	0.10	0.048	(0.234)	0.043	0.005
224	18.67	0.10	0.048	(0.233)	0.043	0.005
225	18.75	0.10	0.048	(0.232)	0.043	0.005
226	18.83	0.07	0.032	(0.231)	0.029	0.003
227	18.92	0.07	0.032	(0.230)	0.029	0.003
228	19.00	0.07	0.032	(0.229)	0.029	0.003
229	19.08	0.10	0.048	(0.228)	0.043	0.005
230	19.17	0.10	0.048	(0.227)	0.043	0.005
231	19.25	0.10	0.048	(0.226)	0.043	0.005
232	19.33	0.13	0.064	(0.225)	0.058	0.006
233	19.42	0.13	0.064	(0.223)	0.058	0.006
234	19.50	0.13	0.064	(0.222)	0.058	0.006
235	19.58	0.10	0.048	(0.221)	0.043	0.005
236	19.67	0.10	0.048	(0.220)	0.043	0.005
237	19.75	0.10	0.048	(0.219)	0.043	0.005
238	19.83	0.07	0.032	(0.218)	0.029	0.003
239	19.92	0.07	0.032	(0.217)	0.029	0.003
240	20.00	0.07	0.032	(0.216)	0.029	0.003
241	20.08	0.10	0.048	(0.216)	0.043	0.005
242	20.17	0.10	0.048	(0.215)	0.043	0.005
243	20.25	0.10	0.048	(0.214)	0.043	0.005
244	20.33	0.10	0.048	(0.213)	0.043	0.005
245	20.42	0.10	0.048	(0.212)	0.043	0.005
246	20.50	0.10	0.048	(0.211)	0.043	0.005
247	20.58	0.10	0.048	(0.210)	0.043	0.005

248	20.67	0.10	0.048	(0.209)	0.043	0.005
249	20.75	0.10	0.048	(0.208)	0.043	0.005
250	20.83	0.07	0.032	(0.207)	0.029	0.003
251	20.92	0.07	0.032	(0.207)	0.029	0.003
252	21.00	0.07	0.032	(0.206)	0.029	0.003
253	21.08	0.10	0.048	(0.205)	0.043	0.005
254	21.17	0.10	0.048	(0.204)	0.043	0.005
255	21.25	0.10	0.048	(0.203)	0.043	0.005
256	21.33	0.07	0.032	(0.203)	0.029	0.003
257	21.42	0.07	0.032	(0.202)	0.029	0.003
258	21.50	0.07	0.032	(0.201)	0.029	0.003
259	21.58	0.10	0.048	(0.200)	0.043	0.005
260	21.67	0.10	0.048	(0.200)	0.043	0.005
261	21.75	0.10	0.048	(0.199)	0.043	0.005
262	21.83	0.07	0.032	(0.198)	0.029	0.003
263	21.92	0.07	0.032	(0.198)	0.029	0.003
264	22.00	0.07	0.032	(0.197)	0.029	0.003
265	22.08	0.10	0.048	(0.196)	0.043	0.005
266	22.17	0.10	0.048	(0.196)	0.043	0.005
267	22.25	0.10	0.048	(0.195)	0.043	0.005
268	22.33	0.07	0.032	(0.194)	0.029	0.003
269	22.42	0.07	0.032	(0.194)	0.029	0.003
270	22.50	0.07	0.032	(0.193)	0.029	0.003
271	22.58	0.07	0.032	(0.193)	0.029	0.003
272	22.67	0.07	0.032	(0.192)	0.029	0.003
273	22.75	0.07	0.032	(0.192)	0.029	0.003
274	22.83	0.07	0.032	(0.191)	0.029	0.003
275	22.92	0.07	0.032	(0.191)	0.029	0.003
276	23.00	0.07	0.032	(0.190)	0.029	0.003
277	23.08	0.07	0.032	(0.190)	0.029	0.003
278	23.17	0.07	0.032	(0.189)	0.029	0.003
279	23.25	0.07	0.032	(0.189)	0.029	0.003
280	23.33	0.07	0.032	(0.188)	0.029	0.003
281	23.42	0.07	0.032	(0.188)	0.029	0.003
282	23.50	0.07	0.032	(0.188)	0.029	0.003
283	23.58	0.07	0.032	(0.187)	0.029	0.003
284	23.67	0.07	0.032	(0.187)	0.029	0.003
285	23.75	0.07	0.032	(0.187)	0.029	0.003
286	23.83	0.07	0.032	(0.187)	0.029	0.003
287	23.92	0.07	0.032	(0.187)	0.029	0.003
288	24.00	0.07	0.032	(0.186)	0.029	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 7.7

Flood volume = Effective rainfall 0.64(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 3.36(In)
Total soil loss = 2.246(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 18746.7 Cubic Feet
Total soil loss = 97847.1 Cubic Feet

Peak flow rate of this hydrograph = 1.807(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	0.0001	0.01	Q				
0+10	0.0002	0.02	Q				
0+15	0.0004	0.02	Q				
0+20	0.0006	0.03	Q				
0+25	0.0008	0.04	Q				
0+30	0.0011	0.04	Q				
0+35	0.0014	0.04	Q				
0+40	0.0016	0.04	Q				
0+45	0.0019	0.04	Q				
0+50	0.0022	0.04	Q				
0+55	0.0025	0.05	Q				
1+ 0	0.0029	0.05	Q				
1+ 5	0.0032	0.05	Q				
1+10	0.0035	0.04	Q				
1+15	0.0038	0.04	Q				
1+20	0.0040	0.04	Q				
1+25	0.0043	0.04	Q				
1+30	0.0046	0.04	Q				
1+35	0.0048	0.04	Q				
1+40	0.0051	0.04	Q				
1+45	0.0054	0.04	Q				
1+50	0.0057	0.04	Q				
1+55	0.0060	0.05	Q				
2+ 0	0.0064	0.05	Q				
2+ 5	0.0067	0.05	Q				

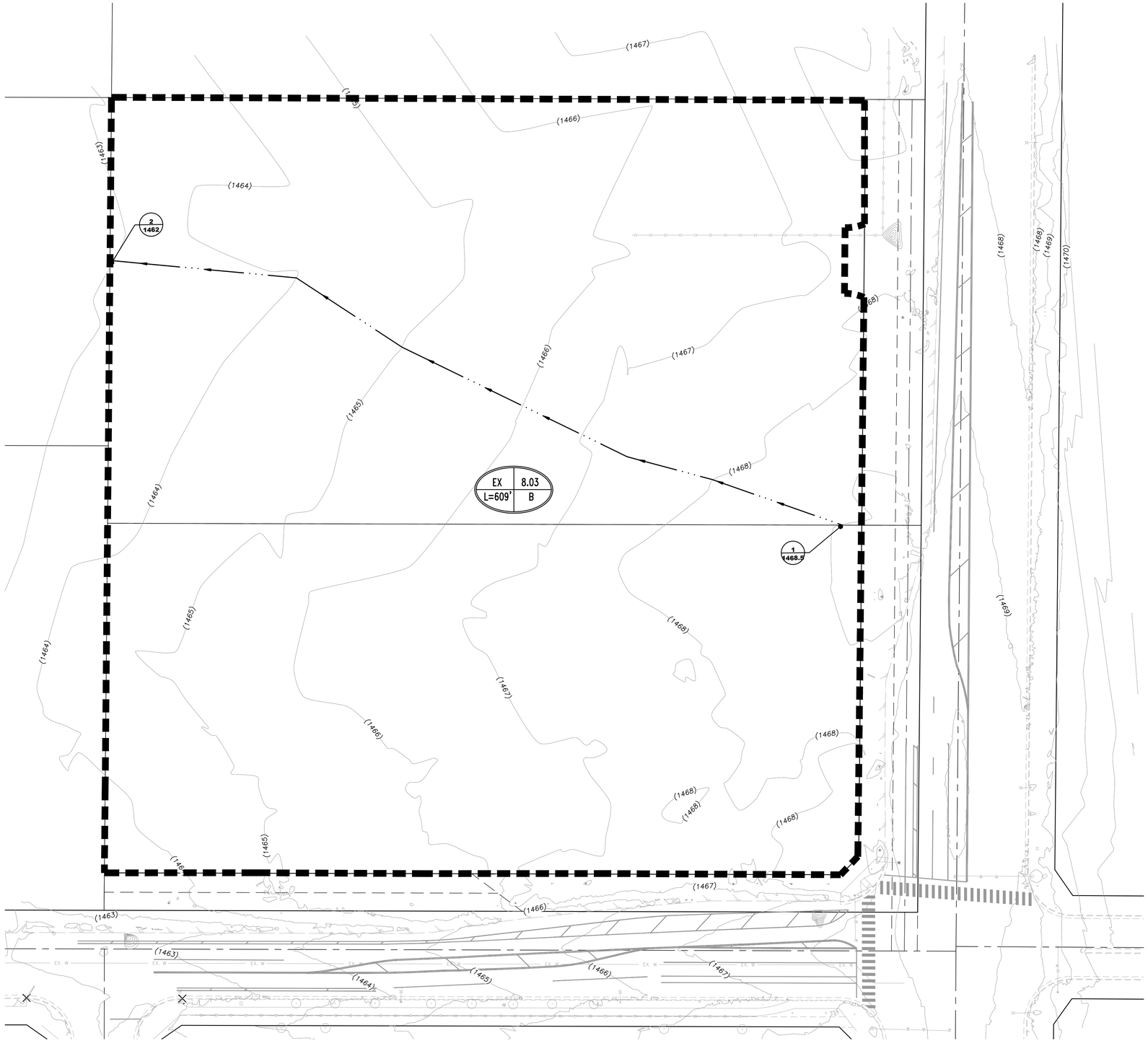
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2+10       0.0071      0.05  Q          |          |          |          |
2+15       0.0074      0.05  Q          |          |          |          |
2+20       0.0078      0.05  Q          |          |          |          |
2+25       0.0082      0.05  Q          |          |          |          |
2+30       0.0085      0.05  Q          |          |          |          |
2+35       0.0089      0.06  Q          |          |          |          |
2+40       0.0093      0.06  Q          |          |          |          |
2+45       0.0098      0.06  Q          |          |          |          |
2+50       0.0102      0.06  Q          |          |          |          |
2+55       0.0107      0.06  Q          |          |          |          |
3+ 0       0.0111      0.06  QV         |          |          |          |
3+ 5       0.0116      0.06  QV         |          |          |          |
3+10       0.0120      0.06  QV         |          |          |          |
3+15       0.0124      0.06  QV         |          |          |          |
3+20       0.0129      0.06  QV         |          |          |          |
3+25       0.0133      0.06  QV         |          |          |          |
3+30       0.0138      0.06  QV         |          |          |          |
3+35       0.0142      0.06  QV         |          |          |          |
3+40       0.0147      0.06  QV         |          |          |          |
3+45       0.0151      0.06  QV         |          |          |          |
3+50       0.0156      0.07  QV         |          |          |          |
3+55       0.0161      0.08  QV         |          |          |          |
4+ 0       0.0167      0.08  QV         |          |          |          |
4+ 5       0.0172      0.08  QV         |          |          |          |
4+10       0.0177      0.08  QV         |          |          |          |
4+15       0.0183      0.08  QV         |          |          |          |
4+20       0.0188      0.08  QV         |          |          |          |
4+25       0.0194      0.09  QV         |          |          |          |
4+30       0.0201      0.09  QV         |          |          |          |
4+35       0.0207      0.09  QV         |          |          |          |
4+40       0.0213      0.09  QV         |          |          |          |
4+45       0.0219      0.09  Q V        |          |          |          |
4+50       0.0226      0.10  Q V        |          |          |          |
4+55       0.0233      0.10  Q V        |          |          |          |
5+ 0       0.0240      0.10  Q V        |          |          |          |
5+ 5       0.0246      0.09  Q V        |          |          |          |
5+10       0.0252      0.08  Q V        |          |          |          |
5+15       0.0257      0.08  Q V        |          |          |          |
5+20       0.0263      0.08  Q V        |          |          |          |
5+25       0.0269      0.09  Q V        |          |          |          |
5+30       0.0275      0.09  Q V        |          |          |          |
5+35       0.0282      0.10  Q V        |          |          |          |
5+40       0.0289      0.10  Q V        |          |          |          |
5+45       0.0296      0.10  Q V        |          |          |          |
5+50       0.0303      0.10  Q V        |          |          |          |
5+55       0.0310      0.10  Q V        |          |          |          |
6+ 0       0.0317      0.10  Q V        |          |          |          |
6+ 5       0.0325      0.11  Q  V       |          |          |          |
6+10       0.0333      0.11  Q  V       |          |          |          |
6+15       0.0341      0.12  Q  V       |          |          |          |
6+20       0.0349      0.12  Q  V       |          |          |          |
6+25       0.0357      0.12  Q  V       |          |          |          |
6+30       0.0365      0.12  Q  V       |          |          |          |
6+35       0.0373      0.12  Q  V       |          |          |          |
6+40       0.0382      0.13  Q  V       |          |          |          |
6+45       0.0391      0.13  Q  V       |          |          |          |
6+50       0.0400      0.13  Q  V       |          |          |          |
6+55       0.0409      0.13  Q  V       |          |          |          |
7+ 0       0.0418      0.13  Q  V       |          |          |          |
7+ 5       0.0427      0.13  Q  V       |          |          |          |
7+10       0.0435      0.13  Q   V      |          |          |          |
7+15       0.0444      0.13  Q   V      |          |          |          |
7+20       0.0454      0.13  Q   V      |          |          |          |
7+25       0.0463      0.14  Q   V      |          |          |          |
7+30       0.0473      0.14  Q   V      |          |          |          |
7+35       0.0483      0.15  Q   V      |          |          |          |
7+40       0.0494      0.15  Q   V      |          |          |          |
7+45       0.0504      0.15  Q   V      |          |          |          |
7+50       0.0515      0.16  Q   V      |          |          |          |
7+55       0.0527      0.17  Q   V      |          |          |          |
8+ 0       0.0538      0.17  Q    V     |          |          |          |
8+ 5       0.0551      0.18  Q    V     |          |          |          |
8+10       0.0564      0.19  Q    V     |          |          |          |
8+15       0.0577      0.19  Q    V     |          |          |          |
8+20       0.0590      0.19  Q    V     |          |          |          |
8+25       0.0604      0.19  Q    V     |          |          |          |
8+30       0.0617      0.19  Q    V     |          |          |          |
8+35       0.0631      0.20  Q    V     |          |          |          |
8+40       0.0645      0.21  Q    V     |          |          |          |
8+45       0.0659      0.21  Q     V    |          |          |          |
8+50       0.0674      0.21  Q     V    |          |          |          |
8+55       0.0689      0.22  Q     V    |          |          |          |
9+ 0       0.0704      0.22  Q     V    |          |          |          |
9+ 5       0.0720      0.23  Q     V    |          |          |          |
9+10       0.0736      0.24  Q     V    |          |          |          |
9+15       0.0753      0.24  Q     V    |          |          |          |
9+20       0.0770      0.25  |Q     V    |          |          |          |
```

9+25	0.0788	0.26	Q	V			
9+30	0.0806	0.26	Q	V			
9+35	0.0824	0.26	Q	V			
9+40	0.0843	0.27	Q	V			
9+45	0.0861	0.27	Q	V			
9+50	0.0880	0.28	Q	V			
9+55	0.0900	0.28	Q	V			
10+ 0	0.0919	0.28	Q	V			
10+ 5	0.0937	0.25	Q	V			
10+10	0.0951	0.21	Q	V			
10+15	0.0965	0.20	Q	V			
10+20	0.0978	0.20	Q	V			
10+25	0.0992	0.19	Q	V			
10+30	0.1005	0.19	Q	V			
10+35	0.1020	0.22	Q	V			
10+40	0.1037	0.25	Q	V			
10+45	0.1055	0.25	Q	V			
10+50	0.1073	0.26	Q	V			
10+55	0.1090	0.26	Q	V			
11+ 0	0.1108	0.26	Q	V			
11+ 5	0.1126	0.25	Q	V			
11+10	0.1143	0.25	Q	V			
11+15	0.1160	0.25	Q	V			
11+20	0.1177	0.25	Q	V			
11+25	0.1194	0.25	Q	V			
11+30	0.1211	0.25	Q	V			
11+35	0.1227	0.24	Q	V			
11+40	0.1242	0.22	Q	V			
11+45	0.1258	0.22	Q	V			
11+50	0.1273	0.23	Q	V			
11+55	0.1289	0.23	Q	V			
12+ 0	0.1305	0.23	Q	V			
12+ 5	0.1326	0.30	Q	V			
12+10	0.1353	0.39	Q	V			
12+15	0.1382	0.42	Q	V			
12+20	0.1416	0.49	Q	V			
12+25	0.1456	0.57	Q	V			
12+30	0.1497	0.60	Q	V			
12+35	0.1546	0.71	Q	V			
12+40	0.1605	0.85	Q	V			
12+45	0.1666	0.89	Q	V			
12+50	0.1733	0.96	Q	V			
12+55	0.1804	1.04	Q	V			
13+ 0	0.1878	1.07	Q	V			
13+ 5	0.1970	1.33	Q	V			
13+10	0.2083	1.64	Q	V			
13+15	0.2202	1.72	Q	V			
13+20	0.2323	1.76	Q	V			
13+25	0.2447	1.79	Q	V			
13+30	0.2571	1.81	Q	V			
13+35	0.2660	1.29	Q	V			
13+40	0.2705	0.65	Q	V			
13+45	0.2741	0.52	Q	V			
13+50	0.2773	0.47	Q	V			
13+55	0.2804	0.45	Q	V			
14+ 0	0.2836	0.46	Q	V			
14+ 5	0.2882	0.67	Q	V			
14+10	0.2945	0.92	Q	V			
14+15	0.3012	0.98	Q	V			
14+20	0.3079	0.97	Q	V			
14+25	0.3144	0.94	Q	V			
14+30	0.3208	0.93	Q	V			
14+35	0.3273	0.94	Q	V			
14+40	0.3338	0.95	Q	V			
14+45	0.3405	0.96	Q	V			
14+50	0.3468	0.93	Q	V			
14+55	0.3529	0.88	Q	V			
15+ 0	0.3590	0.88	Q	V			
15+ 5	0.3647	0.84	Q	V			
15+10	0.3701	0.79	Q	V			
15+15	0.3756	0.79	Q	V			
15+20	0.3807	0.74	Q	V			
15+25	0.3855	0.69	Q	V			
15+30	0.3902	0.69	Q	V			
15+35	0.3939	0.53	Q	V			
15+40	0.3961	0.32	Q	V			
15+45	0.3980	0.28	Q	V			
15+50	0.3998	0.26	Q	V			
15+55	0.4015	0.25	Q	V			
16+ 0	0.4032	0.25	Q	V			
16+ 5	0.4043	0.17	Q	V			
16+10	0.4049	0.09	Q	V			
16+15	0.4054	0.07	Q	V			
16+20	0.4058	0.06	Q	V			
16+25	0.4061	0.05	Q	V			
16+30	0.4065	0.05	Q	V			
16+35	0.4068	0.05	Q	V			

16+40	0.4071	0.04	Q	|	|	|	V |
16+45	0.4074	0.04	Q	|	|	|	V |
16+50	0.4076	0.04	Q	|	|	|	V |
16+55	0.4079	0.04	Q	|	|	|	V |
17+ 0	0.4082	0.04	Q	|	|	|	V |
17+ 5	0.4085	0.05	Q	|	|	|	V |
17+10	0.4089	0.06	Q	|	|	|	V |
17+15	0.4094	0.06	Q	|	|	|	V |
17+20	0.4098	0.06	Q	|	|	|	V |
17+25	0.4102	0.06	Q	|	|	|	V |
17+30	0.4107	0.06	Q	|	|	|	V |
17+35	0.4111	0.06	Q	|	|	|	V |
17+40	0.4116	0.06	Q	|	|	|	V |
17+45	0.4120	0.06	Q	|	|	|	V |
17+50	0.4124	0.06	Q	|	|	|	V |
17+55	0.4128	0.05	Q	|	|	|	V |
18+ 0	0.4132	0.05	Q	|	|	|	V |
18+ 5	0.4135	0.05	Q	|	|	|	V |
18+10	0.4139	0.05	Q	|	|	|	V |
18+15	0.4143	0.05	Q	|	|	|	V |
18+20	0.4146	0.05	Q	|	|	|	V |
18+25	0.4150	0.05	Q	|	|	|	V |
18+30	0.4153	0.05	Q	|	|	|	V |
18+35	0.4156	0.05	Q	|	|	|	V |
18+40	0.4159	0.04	Q	|	|	|	V |
18+45	0.4162	0.04	Q	|	|	|	V |
18+50	0.4164	0.03	Q	|	|	|	V |
18+55	0.4166	0.03	Q	|	|	|	V |
19+ 0	0.4168	0.03	Q	|	|	|	V |
19+ 5	0.4170	0.03	Q	|	|	|	V |
19+10	0.4173	0.04	Q	|	|	|	V |
19+15	0.4175	0.04	Q	|	|	|	V |
19+20	0.4178	0.04	Q	|	|	|	V |
19+25	0.4182	0.05	Q	|	|	|	V |
19+30	0.4185	0.05	Q	|	|	|	V |
19+35	0.4189	0.05	Q	|	|	|	V |
19+40	0.4191	0.04	Q	|	|	|	V |
19+45	0.4194	0.04	Q	|	|	|	V |
19+50	0.4197	0.03	Q	|	|	|	V|
19+55	0.4198	0.03	Q	|	|	|	V|
20+ 0	0.4200	0.03	Q	|	|	|	V|
20+ 5	0.4202	0.03	Q	|	|	|	V|
20+10	0.4205	0.04	Q	|	|	|	V|
20+15	0.4208	0.04	Q	|	|	|	V|
20+20	0.4210	0.04	Q	|	|	|	V|
20+25	0.4213	0.04	Q	|	|	|	V|
20+30	0.4216	0.04	Q	|	|	|	V|
20+35	0.4218	0.04	Q	|	|	|	V|
20+40	0.4221	0.04	Q	|	|	|	V|
20+45	0.4224	0.04	Q	|	|	|	V|
20+50	0.4226	0.03	Q	|	|	|	V|
20+55	0.4228	0.03	Q	|	|	|	V|
21+ 0	0.4230	0.03	Q	|	|	|	V|
21+ 5	0.4232	0.03	Q	|	|	|	V|
21+10	0.4234	0.04	Q	|	|	|	V|
21+15	0.4237	0.04	Q	|	|	|	V|
21+20	0.4239	0.03	Q	|	|	|	V|
21+25	0.4241	0.03	Q	|	|	|	V|
21+30	0.4243	0.03	Q	|	|	|	V|
21+35	0.4245	0.03	Q	|	|	|	V|
21+40	0.4248	0.04	Q	|	|	|	V|
21+45	0.4250	0.04	Q	|	|	|	V|
21+50	0.4253	0.03	Q	|	|	|	V|
21+55	0.4255	0.03	Q	|	|	|	V|
22+ 0	0.4257	0.03	Q	|	|	|	V|
22+ 5	0.4259	0.03	Q	|	|	|	V|
22+10	0.4261	0.04	Q	|	|	|	V|
22+15	0.4264	0.04	Q	|	|	|	V|
22+20	0.4266	0.03	Q	|	|	|	V|
22+25	0.4268	0.03	Q	|	|	|	V|
22+30	0.4270	0.03	Q	|	|	|	V|
22+35	0.4272	0.03	Q	|	|	|	V|
22+40	0.4273	0.03	Q	|	|	|	V|
22+45	0.4275	0.03	Q	|	|	|	V|
22+50	0.4277	0.03	Q	|	|	|	V|
22+55	0.4279	0.03	Q	|	|	|	V|
23+ 0	0.4281	0.03	Q	|	|	|	V|
23+ 5	0.4282	0.03	Q	|	|	|	V|
23+10	0.4284	0.03	Q	|	|	|	V|
23+15	0.4286	0.03	Q	|	|	|	V|
23+20	0.4288	0.03	Q	|	|	|	V|
23+25	0.4290	0.03	Q	|	|	|	V|
23+30	0.4291	0.03	Q	|	|	|	V|
23+35	0.4293	0.03	Q	|	|	|	V|
23+40	0.4295	0.03	Q	|	|	|	V|
23+45	0.4297	0.03	Q	|	|	|	V|
23+50	0.4298	0.03	Q	|	|	|	V|

```
   23+55       0.4300      0.03  Q          |          |          |         v|
   24+ 0       0.4302      0.03  Q          |          |          |         v|
   24+ 5       0.4303      0.02  Q          |          |          |         v|
   24+10       0.4303      0.00  Q          |          |          |         v|
   24+15       0.4304      0.00  Q          |          |          |         v|
   24+20       0.4304      0.00  Q          |          |          |         v|
-------------------------------------------------------------------------------
```

PRE-DEVELOPMENT UNIT HYDROGRAPH MAP
TTM 38346



LEGEND

NODE / ELEV — AREA / LENGTH — ACRES / SOIL

WATERSHED BOUNDARY

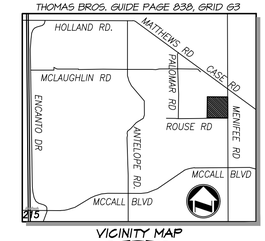
FLOW PATH

0 50 150

25 100 200

SCALE: 1" = 50'

THOMAS BROS. GUIDE PAGE 838, GRID G3



VICINITY MAP (N.T.S.)

T5SR3W SEC 14 S

PRE-DEVELOPMENT
UNIT HYDROGRAPH MAP
TTM 38346

PREPARATION DATE : OCTOBER 2021
REVISION DATE : JUNE 2022

PLAN PREPARED BY:

adkan ENGINEERS

Civil Engineering · Surveying · Planning

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Section 4

Post-Development Unit Hydrograph

```
        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  06/06/22 File: PRO212.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.50                 4.01

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.30                10.44

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    0.500(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    0.500(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  36.0      0.706     0.800        0.198       1.000      0.198
                                                 Sum (F) =   0.198
Area averaged mean soil loss (F) (In/Hr) =  0.198
Minimum soil loss rate ((In/Hr)) =  0.099
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.260
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	4.20	0.252	(0.198)	0.066	0.186
2	0.17	4.30	0.258	(0.198)	0.067	0.191
3	0.25	5.00	0.300	(0.198)	0.078	0.222
4	0.33	5.00	0.300	(0.198)	0.078	0.222
5	0.42	5.80	0.348	(0.198)	0.090	0.258
6	0.50	6.50	0.390	(0.198)	0.101	0.289
7	0.58	7.40	0.444	(0.198)	0.115	0.329
8	0.67	8.60	0.516	(0.198)	0.134	0.382
9	0.75	12.30	0.738	(0.198)	0.192	0.546
10	0.83	29.10	1.746	0.198	(0.454)	1.548
11	0.92	6.80	0.408	(0.198)	0.106	0.302
12	1.00	5.00	0.300	(0.198)	0.078	0.222
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	4.7

Flood volume = Effective rainfall 0.39(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.3(Ac.Ft)
Total soil loss = 0.11(In)
Total soil loss = 0.073(Ac.Ft)
Total rainfall = 0.50(In)
Flood volume = 11406.8 Cubic Feet
Total soil loss = 3166.6 Cubic Feet

Peak flow rate of this hydrograph = 8.244(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	2.5	5.0	7.5	10.0
0+ 5	0.0051	0.74	V Q	|	|	|	|
0+10	0.0146	1.37	| V Q	|	|	|	|
0+15	0.0258	1.63	| V Q	|	|	|	|
0+20	0.0379	1.77	| V Q	|	|	|	|
0+25	0.0512	1.93	| Q	|	|	|	|
0+30	0.0663	2.18	| Q V	|	|	|	|
0+35	0.0832	2.46	| Q| V	|	|	|	|
0+40	0.1027	2.83	| |Q V	|	|	|	|
0+45	0.1281	3.69	| | Q V|	|	|	|	|
0+50	0.1849	8.24	| | |	|	| V | Q	|	|
0+55	0.2314	6.75	| | |	| Q	| V	|	|
1+ 0	0.2516	2.94	| |Q	|	|	| V |	|
1+ 5	0.2602	1.25	| Q	|	|	|	| V|	|
1+10	0.2615	0.20	Q	|	|	|	| V|	|
1+15	0.2619	0.05	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  06/06/22 File: PRO232.out

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------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    0.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    0.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  36.0      0.706     0.800        0.198       1.000      0.198
                                                 Sum (F) =   0.198
Area averaged mean soil loss (F) (In/Hr) =  0.198
Minimum soil loss rate ((In/Hr)) =  0.099
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	0.125	(0.198)	0.032	0.092
2	0.17	1.30	0.125	(0.198)	0.032	0.092
3	0.25	1.10	0.106	(0.198)	0.027	0.078
4	0.33	1.50	0.144	(0.198)	0.037	0.107
5	0.42	1.50	0.144	(0.198)	0.037	0.107
6	0.50	1.80	0.173	(0.198)	0.045	0.128
7	0.58	1.50	0.144	(0.198)	0.037	0.107
8	0.67	1.80	0.173	(0.198)	0.045	0.128
9	0.75	1.80	0.173	(0.198)	0.045	0.128
10	0.83	1.50	0.144	(0.198)	0.037	0.107
11	0.92	1.60	0.154	(0.198)	0.040	0.114
12	1.00	1.80	0.173	(0.198)	0.045	0.128
13	1.08	2.20	0.211	(0.198)	0.055	0.156
14	1.17	2.20	0.211	(0.198)	0.055	0.156
15	1.25	2.20	0.211	(0.198)	0.055	0.156
16	1.33	2.00	0.192	(0.198)	0.050	0.142
17	1.42	2.60	0.250	(0.198)	0.065	0.185
18	1.50	2.70	0.259	(0.198)	0.067	0.192
19	1.58	2.40	0.230	(0.198)	0.060	0.170
20	1.67	2.70	0.259	(0.198)	0.067	0.192
21	1.75	3.30	0.317	(0.198)	0.082	0.234
22	1.83	3.10	0.298	(0.198)	0.077	0.220
23	1.92	2.90	0.278	(0.198)	0.072	0.206
24	2.00	3.00	0.288	(0.198)	0.075	0.213
25	2.08	3.10	0.298	(0.198)	0.077	0.220
26	2.17	4.20	0.403	(0.198)	0.105	0.298
27	2.25	5.00	0.480	(0.198)	0.125	0.355
28	2.33	3.50	0.336	(0.198)	0.087	0.249
29	2.42	6.80	0.653	(0.198)	0.170	0.483
30	2.50	7.30	0.701	(0.198)	0.182	0.519
31	2.58	8.20	0.787	0.198	(0.205)	0.589
32	2.67	5.90	0.566	(0.198)	0.147	0.419
33	2.75	2.00	0.192	(0.198)	0.050	0.142
34	2.83	1.80	0.173	(0.198)	0.045	0.128
35	2.92	1.80	0.173	(0.198)	0.045	0.128
36	3.00	0.60	0.058	(0.198)	0.015	0.043
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	7.1

Flood volume = Effective rainfall 0.59(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.21(In)
Total soil loss = 0.139(Ac.Ft)
Total rainfall = 0.80(In)
Flood volume = 17272.5 Cubic Feet
Total soil loss = 6045.8 Cubic Feet

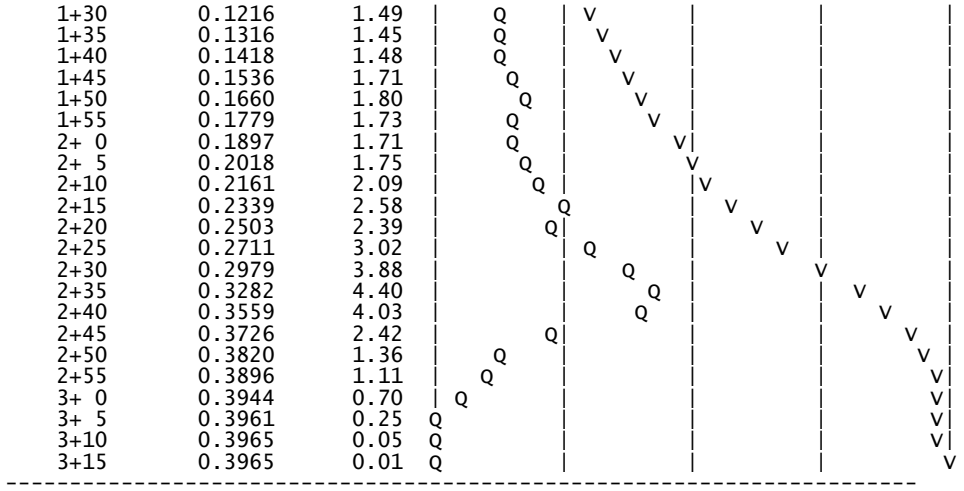
Peak flow rate of this hydrograph = 4.401(CFS)

++

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	2.5	5.0	7.5	10.0
0+ 5	0.0025	0.37	VQ				
0+10	0.0071	0.67	V Q				
0+15	0.0118	0.67	|VQ				
0+20	0.0170	0.76	|V Q				
0+25	0.0228	0.84	| VQ				
0+30	0.0293	0.94	| VQ				
0+35	0.0357	0.93	| Q				
0+40	0.0423	0.96	| QV				
0+45	0.0494	1.02	| Q				
0+50	0.0559	0.95	| Q V				
0+55	0.0621	0.91	| Q V				
1+ 0	0.0688	0.98	| Q V				
1+ 5	0.0767	1.13	| Q V				
1+10	0.0852	1.24	| Q V				
1+15	0.0939	1.26	| Q V|				
1+20	0.1022	1.21	| Q V				
1+25	0.1114	1.33	| Q |V				


1+30 0.1216 1.49
1+35 0.1316 1.45
1+40 0.1418 1.48
1+45 0.1536 1.71
1+50 0.1660 1.80
1+55 0.1779 1.73
2+ 0 0.1897 1.71
2+ 5 0.2018 1.75
2+10 0.2161 2.09
2+15 0.2339 2.58
2+20 0.2503 2.39
2+25 0.2711 3.02
2+30 0.2979 3.88
2+35 0.3282 4.40
2+40 0.3559 4.03
2+45 0.3726 2.42
2+50 0.3820 1.36
2+55 0.3896 1.11
3+ 0 0.3944 0.70
3+ 5 0.3961 0.25
3+10 0.3965 0.05
3+15 0.3965 0.01

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
                Study date  06/06/22 File: PRO262.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    1.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  36.0      0.706     0.800        0.198       1.000      0.198
                                                 Sum (F) =   0.198
Area averaged mean soil loss (F) (In/Hr) =  0.198
Minimum soil loss rate ((In/Hr)) =  0.099
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.060	(0.198)	0.016	0.044
2	0.17	0.60	0.072	(0.198)	0.019	0.053
3	0.25	0.60	0.072	(0.198)	0.019	0.053
4	0.33	0.60	0.072	(0.198)	0.019	0.053
5	0.42	0.60	0.072	(0.198)	0.019	0.053
6	0.50	0.70	0.084	(0.198)	0.022	0.062
7	0.58	0.70	0.084	(0.198)	0.022	0.062
8	0.67	0.70	0.084	(0.198)	0.022	0.062
9	0.75	0.70	0.084	(0.198)	0.022	0.062
10	0.83	0.70	0.084	(0.198)	0.022	0.062
11	0.92	0.70	0.084	(0.198)	0.022	0.062
12	1.00	0.80	0.096	(0.198)	0.025	0.071
13	1.08	0.80	0.096	(0.198)	0.025	0.071
14	1.17	0.80	0.096	(0.198)	0.025	0.071
15	1.25	0.80	0.096	(0.198)	0.025	0.071
16	1.33	0.80	0.096	(0.198)	0.025	0.071
17	1.42	0.80	0.096	(0.198)	0.025	0.071
18	1.50	0.80	0.096	(0.198)	0.025	0.071
19	1.58	0.80	0.096	(0.198)	0.025	0.071
20	1.67	0.80	0.096	(0.198)	0.025	0.071
21	1.75	0.80	0.096	(0.198)	0.025	0.071
22	1.83	0.80	0.096	(0.198)	0.025	0.071
23	1.92	0.80	0.096	(0.198)	0.025	0.071
24	2.00	0.90	0.108	(0.198)	0.028	0.080
25	2.08	0.80	0.096	(0.198)	0.025	0.071
26	2.17	0.90	0.108	(0.198)	0.028	0.080
27	2.25	0.90	0.108	(0.198)	0.028	0.080
28	2.33	0.90	0.108	(0.198)	0.028	0.080
29	2.42	0.90	0.108	(0.198)	0.028	0.080
30	2.50	0.90	0.108	(0.198)	0.028	0.080
31	2.58	0.90	0.108	(0.198)	0.028	0.080
32	2.67	0.90	0.108	(0.198)	0.028	0.080
33	2.75	1.00	0.120	(0.198)	0.031	0.089
34	2.83	1.00	0.120	(0.198)	0.031	0.089
35	2.92	1.00	0.120	(0.198)	0.031	0.089
36	3.00	1.00	0.120	(0.198)	0.031	0.089
37	3.08	1.00	0.120	(0.198)	0.031	0.089
38	3.17	1.10	0.132	(0.198)	0.034	0.098
39	3.25	1.10	0.132	(0.198)	0.034	0.098
40	3.33	1.10	0.132	(0.198)	0.034	0.098
41	3.42	1.20	0.144	(0.198)	0.037	0.107
42	3.50	1.30	0.156	(0.198)	0.041	0.115
43	3.58	1.40	0.168	(0.198)	0.044	0.124
44	3.67	1.40	0.168	(0.198)	0.044	0.124
45	3.75	1.50	0.180	(0.198)	0.047	0.133
46	3.83	1.50	0.180	(0.198)	0.047	0.133
47	3.92	1.60	0.192	(0.198)	0.050	0.142
48	4.00	1.60	0.192	(0.198)	0.050	0.142
49	4.08	1.70	0.204	(0.198)	0.053	0.151
50	4.17	1.80	0.216	(0.198)	0.056	0.160
51	4.25	1.90	0.228	(0.198)	0.059	0.169
52	4.33	2.00	0.240	(0.198)	0.062	0.178
53	4.42	2.10	0.252	(0.198)	0.066	0.186
54	4.50	2.10	0.252	(0.198)	0.066	0.186
55	4.58	2.20	0.264	(0.198)	0.069	0.195
56	4.67	2.30	0.276	(0.198)	0.072	0.204
57	4.75	2.40	0.288	(0.198)	0.075	0.213
58	4.83	2.40	0.288	(0.198)	0.075	0.213
59	4.92	2.50	0.300	(0.198)	0.078	0.222
60	5.00	2.60	0.312	(0.198)	0.081	0.231
61	5.08	3.10	0.372	(0.198)	0.097	0.275
62	5.17	3.60	0.432	(0.198)	0.112	0.320
63	5.25	3.90	0.468	(0.198)	0.122	0.346
64	5.33	4.20	0.504	(0.198)	0.131	0.373
65	5.42	4.70	0.564	(0.198)	0.147	0.417
66	5.50	5.60	0.672	(0.198)	0.175	0.497
67	5.58	1.90	0.228	(0.198)	0.059	0.169
68	5.67	0.90	0.108	(0.198)	0.028	0.080
69	5.75	0.60	0.072	(0.198)	0.019	0.053
70	5.83	0.50	0.060	(0.198)	0.016	0.044
71	5.92	0.30	0.036	(0.198)	0.009	0.027
72	6.00	0.20	0.024	(0.198)	0.006	0.018
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	8.9

```
      Flood volume = Effective rainfall      0.74(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       0.5(Ac.Ft)
      Total soil loss =      0.26(In)
      Total soil loss =     0.174(Ac.Ft)
      Total rainfall =      1.00(In)
      Flood volume =       21569.6 Cubic Feet
      Total soil loss =        7578.5 Cubic Feet
      ---------------------------------------------------------------------------
       Peak flow rate of this hydrograph =      3.654(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        2.5       5.0       7.5      10.0
---------------------------------------------------------------------------
  0+ 5       0.0012      0.18  Q         |         |         |         |
  0+10       0.0037      0.36  VQ        |         |         |         |
  0+15       0.0065      0.41  VQ        |         |         |         |
  0+20       0.0095      0.43  VQ        |         |         |         |
  0+25       0.0125      0.43  |Q        |         |         |         |
  0+30       0.0157      0.47  |Q        |         |         |         |
  0+35       0.0191      0.50  |Q        |         |         |         |
  0+40       0.0225      0.50  |VQ       |         |         |         |
  0+45       0.0260      0.50  | Q       |         |         |         |
  0+50       0.0295      0.50  | Q       |         |         |         |
  0+55       0.0329      0.50  | Q       |         |         |         |
  1+ 0       0.0367      0.54  | Q       |         |         |         |
  1+ 5       0.0406      0.57  | QV      |         |         |         |
  1+10       0.0445      0.57  | QV      |         |         |         |
  1+15       0.0485      0.58  | QV      |         |         |         |
  1+20       0.0524      0.58  | Q V     |         |         |         |
  1+25       0.0564      0.58  | Q V     |         |         |         |
  1+30       0.0604      0.58  | Q V     |         |         |         |
  1+35       0.0643      0.58  | Q  V    |         |         |         |
  1+40       0.0683      0.58  | Q  V    |         |         |         |
  1+45       0.0722      0.58  | Q  V    |         |         |         |
  1+50       0.0762      0.58  | Q   V   |         |         |         |
  1+55       0.0802      0.58  | Q   V   |         |         |         |
  2+ 0       0.0844      0.61  | Q   V   |         |         |         |
  2+ 5       0.0885      0.60  | Q    V  |         |         |         |
  2+10       0.0928      0.62  | Q    V  |         |         |         |
  2+15       0.0972      0.64  | Q    V  |         |         |         |
  2+20       0.1016      0.65  | Q     V |         |         |         |
  2+25       0.1061      0.65  | Q     V |         |         |         |
  2+30       0.1106      0.65  | Q     V |         |         |         |
  2+35       0.1150      0.65  | Q      V|         |         |         |
  2+40       0.1195      0.65  | Q      V|         |         |         |
  2+45       0.1242      0.68  | Q       V         |         |         |
  2+50       0.1291      0.71  | Q       V         |         |         |
  2+55       0.1340      0.72  | Q       V         |         |         |
  3+ 0       0.1390      0.72  | Q       |V        |         |         |
  3+ 5       0.1439      0.72  | Q       |V        |         |         |
  3+10       0.1491      0.75  |  Q      | V       |         |         |
  3+15       0.1545      0.78  |  Q      | V       |         |         |
  3+20       0.1599      0.79  |  Q      | V       |         |         |
  3+25       0.1656      0.83  |  Q      |  V      |         |         |
  3+30       0.1718      0.89  |  Q      |  V      |         |         |
  3+35       0.1784      0.96  |  Q      |   V     |         |         |
  3+40       0.1852      1.00  |  Q      |   V     |         |         |
  3+45       0.1924      1.04  |   Q     |    V    |         |         |
  3+50       0.1998      1.07  |   Q     |     V   |         |         |
  3+55       0.2074      1.11  |   Q     |     V   |         |         |
  4+ 0       0.2153      1.14  |   Q     |      V  |         |         |
  4+ 5       0.2235      1.18  |   Q     |       V |         |         |
  4+10       0.2321      1.25  |    Q    |       V |         |         |
  4+15       0.2412      1.32  |    Q    |        V|         |         |
  4+20       0.2507      1.39  |    Q    |         V         |         |
  4+25       0.2608      1.46  |    Q    |         |V        |         |
  4+30       0.2712      1.50  |     Q   |         |V        |         |
  4+35       0.2818      1.54  |     Q   |         | V       |         |
  4+40       0.2929      1.61  |     Q   |         |  V      |         |
  4+45       0.3044      1.68  |     Q   |         |   V     |         |
  4+50       0.3163      1.72  |     Q   |         |    V    |         |
  4+55       0.3284      1.76  |      Q  |         |     V   |         |
  5+ 0       0.3410      1.83  |      Q  |         |      V  |         |
  5+ 5       0.3550      2.04  |       Q |         |       V |         |
  5+10       0.3713      2.37  |        Q|         |        V|         |
  5+15       0.3895      2.65  |         Q         |         |V        |
  5+20       0.4093      2.88  |         |Q        |         |  V      |
  5+25       0.4312      3.17  |         | Q       |         |   V     |
  5+30       0.4563      3.65  |         |   Q     |         |     V   |
  5+35       0.4746      2.65  |         Q         |         |       V |
  5+40       0.4833      1.27  |    Q    |         |         |        V|
```

```
    5+45       0.4880      0.68  | Q       |         |         |        V|
    5+50       0.4910      0.44  |Q        |         |         |        V|
    5+55       0.4931      0.30  |Q        |         |         |        V|
    6+ 0       0.4944      0.20  Q         |         |         |        V|
    6+ 5       0.4950      0.08  Q         |         |         |        V|
    6+10       0.4951      0.02  Q         |         |         |        V|
    6+15       0.4952      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
                Study date  06/06/22 File: PRO2242.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =    2.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    1.600(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.600(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  36.0      0.706     0.800        0.198       1.000      0.198
                                                 Sum (F) =   0.198
Area averaged mean soil loss (F) (In/Hr) =  0.198
Minimum soil loss rate ((In/Hr)) =  0.099
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.260
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               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)
------------------------------------------------------------------------
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1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.013	(0.350)	0.003	0.009
2	0.17	0.07	0.013	(0.349)	0.003	0.009
3	0.25	0.07	0.013	(0.348)	0.003	0.009
4	0.33	0.10	0.019	(0.346)	0.005	0.014
5	0.42	0.10	0.019	(0.345)	0.005	0.014
6	0.50	0.10	0.019	(0.344)	0.005	0.014
7	0.58	0.10	0.019	(0.342)	0.005	0.014
8	0.67	0.10	0.019	(0.341)	0.005	0.014
9	0.75	0.10	0.019	(0.340)	0.005	0.014
10	0.83	0.13	0.026	(0.338)	0.007	0.019
11	0.92	0.13	0.026	(0.337)	0.007	0.019
12	1.00	0.13	0.026	(0.336)	0.007	0.019
13	1.08	0.10	0.019	(0.334)	0.005	0.014
14	1.17	0.10	0.019	(0.333)	0.005	0.014
15	1.25	0.10	0.019	(0.332)	0.005	0.014
16	1.33	0.10	0.019	(0.330)	0.005	0.014
17	1.42	0.10	0.019	(0.329)	0.005	0.014
18	1.50	0.10	0.019	(0.328)	0.005	0.014
19	1.58	0.10	0.019	(0.326)	0.005	0.014
20	1.67	0.10	0.019	(0.325)	0.005	0.014
21	1.75	0.10	0.019	(0.324)	0.005	0.014
22	1.83	0.13	0.026	(0.323)	0.007	0.019
23	1.92	0.13	0.026	(0.321)	0.007	0.019
24	2.00	0.13	0.026	(0.320)	0.007	0.019
25	2.08	0.13	0.026	(0.319)	0.007	0.019
26	2.17	0.13	0.026	(0.317)	0.007	0.019
27	2.25	0.13	0.026	(0.316)	0.007	0.019
28	2.33	0.13	0.026	(0.315)	0.007	0.019
29	2.42	0.13	0.026	(0.313)	0.007	0.019
30	2.50	0.13	0.026	(0.312)	0.007	0.019
31	2.58	0.17	0.032	(0.311)	0.008	0.024
32	2.67	0.17	0.032	(0.310)	0.008	0.024
33	2.75	0.17	0.032	(0.308)	0.008	0.024
34	2.83	0.17	0.032	(0.307)	0.008	0.024
35	2.92	0.17	0.032	(0.306)	0.008	0.024
36	3.00	0.17	0.032	(0.305)	0.008	0.024
37	3.08	0.17	0.032	(0.303)	0.008	0.024
38	3.17	0.17	0.032	(0.302)	0.008	0.024
39	3.25	0.17	0.032	(0.301)	0.008	0.024
40	3.33	0.17	0.032	(0.300)	0.008	0.024
41	3.42	0.17	0.032	(0.298)	0.008	0.024
42	3.50	0.17	0.032	(0.297)	0.008	0.024
43	3.58	0.17	0.032	(0.296)	0.008	0.024
44	3.67	0.17	0.032	(0.295)	0.008	0.024
45	3.75	0.17	0.032	(0.293)	0.008	0.024
46	3.83	0.20	0.038	(0.292)	0.010	0.028
47	3.92	0.20	0.038	(0.291)	0.010	0.028
48	4.00	0.20	0.038	(0.290)	0.010	0.028
49	4.08	0.20	0.038	(0.288)	0.010	0.028
50	4.17	0.20	0.038	(0.287)	0.010	0.028
51	4.25	0.20	0.038	(0.286)	0.010	0.028
52	4.33	0.23	0.045	(0.285)	0.012	0.033
53	4.42	0.23	0.045	(0.284)	0.012	0.033
54	4.50	0.23	0.045	(0.282)	0.012	0.033
55	4.58	0.23	0.045	(0.281)	0.012	0.033
56	4.67	0.23	0.045	(0.280)	0.012	0.033
57	4.75	0.23	0.045	(0.279)	0.012	0.033
58	4.83	0.27	0.051	(0.277)	0.013	0.038
59	4.92	0.27	0.051	(0.276)	0.013	0.038
60	5.00	0.27	0.051	(0.275)	0.013	0.038
61	5.08	0.20	0.038	(0.274)	0.010	0.028
62	5.17	0.20	0.038	(0.273)	0.010	0.028
63	5.25	0.20	0.038	(0.271)	0.010	0.028
64	5.33	0.23	0.045	(0.270)	0.012	0.033
65	5.42	0.23	0.045	(0.269)	0.012	0.033
66	5.50	0.23	0.045	(0.268)	0.012	0.033
67	5.58	0.27	0.051	(0.267)	0.013	0.038
68	5.67	0.27	0.051	(0.266)	0.013	0.038
69	5.75	0.27	0.051	(0.264)	0.013	0.038
70	5.83	0.27	0.051	(0.263)	0.013	0.038
71	5.92	0.27	0.051	(0.262)	0.013	0.038
72	6.00	0.27	0.051	(0.261)	0.013	0.038
73	6.08	0.30	0.058	(0.260)	0.015	0.043
74	6.17	0.30	0.058	(0.259)	0.015	0.043

75	6.25	0.30	0.058	(0.257)	0.015	0.043
76	6.33	0.30	0.058	(0.256)	0.015	0.043
77	6.42	0.30	0.058	(0.255)	0.015	0.043
78	6.50	0.30	0.058	(0.254)	0.015	0.043
79	6.58	0.33	0.064	(0.253)	0.017	0.047
80	6.67	0.33	0.064	(0.252)	0.017	0.047
81	6.75	0.33	0.064	(0.251)	0.017	0.047
82	6.83	0.33	0.064	(0.249)	0.017	0.047
83	6.92	0.33	0.064	(0.248)	0.017	0.047
84	7.00	0.33	0.064	(0.247)	0.017	0.047
85	7.08	0.33	0.064	(0.246)	0.017	0.047
86	7.17	0.33	0.064	(0.245)	0.017	0.047
87	7.25	0.33	0.064	(0.244)	0.017	0.047
88	7.33	0.37	0.070	(0.243)	0.018	0.052
89	7.42	0.37	0.070	(0.242)	0.018	0.052
90	7.50	0.37	0.070	(0.241)	0.018	0.052
91	7.58	0.40	0.077	(0.239)	0.020	0.057
92	7.67	0.40	0.077	(0.238)	0.020	0.057
93	7.75	0.40	0.077	(0.237)	0.020	0.057
94	7.83	0.43	0.083	(0.236)	0.022	0.062
95	7.92	0.43	0.083	(0.235)	0.022	0.062
96	8.00	0.43	0.083	(0.234)	0.022	0.062
97	8.08	0.50	0.096	(0.233)	0.025	0.071
98	8.17	0.50	0.096	(0.232)	0.025	0.071
99	8.25	0.50	0.096	(0.231)	0.025	0.071
100	8.33	0.50	0.096	(0.230)	0.025	0.071
101	8.42	0.50	0.096	(0.229)	0.025	0.071
102	8.50	0.50	0.096	(0.227)	0.025	0.071
103	8.58	0.53	0.102	(0.226)	0.027	0.076
104	8.67	0.53	0.102	(0.225)	0.027	0.076
105	8.75	0.53	0.102	(0.224)	0.027	0.076
106	8.83	0.57	0.109	(0.223)	0.028	0.081
107	8.92	0.57	0.109	(0.222)	0.028	0.081
108	9.00	0.57	0.109	(0.221)	0.028	0.081
109	9.08	0.63	0.122	(0.220)	0.032	0.090
110	9.17	0.63	0.122	(0.219)	0.032	0.090
111	9.25	0.63	0.122	(0.218)	0.032	0.090
112	9.33	0.67	0.128	(0.217)	0.033	0.095
113	9.42	0.67	0.128	(0.216)	0.033	0.095
114	9.50	0.67	0.128	(0.215)	0.033	0.095
115	9.58	0.70	0.134	(0.214)	0.035	0.099
116	9.67	0.70	0.134	(0.213)	0.035	0.099
117	9.75	0.70	0.134	(0.212)	0.035	0.099
118	9.83	0.73	0.141	(0.211)	0.037	0.104
119	9.92	0.73	0.141	(0.210)	0.037	0.104
120	10.00	0.73	0.141	(0.209)	0.037	0.104
121	10.08	0.50	0.096	(0.208)	0.025	0.071
122	10.17	0.50	0.096	(0.207)	0.025	0.071
123	10.25	0.50	0.096	(0.206)	0.025	0.071
124	10.33	0.50	0.096	(0.205)	0.025	0.071
125	10.42	0.50	0.096	(0.204)	0.025	0.071
126	10.50	0.50	0.096	(0.203)	0.025	0.071
127	10.58	0.67	0.128	(0.202)	0.033	0.095
128	10.67	0.67	0.128	(0.201)	0.033	0.095
129	10.75	0.67	0.128	(0.200)	0.033	0.095
130	10.83	0.67	0.128	(0.199)	0.033	0.095
131	10.92	0.67	0.128	(0.198)	0.033	0.095
132	11.00	0.67	0.128	(0.197)	0.033	0.095
133	11.08	0.63	0.122	(0.196)	0.032	0.090
134	11.17	0.63	0.122	(0.195)	0.032	0.090
135	11.25	0.63	0.122	(0.194)	0.032	0.090
136	11.33	0.63	0.122	(0.193)	0.032	0.090
137	11.42	0.63	0.122	(0.192)	0.032	0.090
138	11.50	0.63	0.122	(0.191)	0.032	0.090
139	11.58	0.57	0.109	(0.190)	0.028	0.081
140	11.67	0.57	0.109	(0.189)	0.028	0.081
141	11.75	0.57	0.109	(0.188)	0.028	0.081
142	11.83	0.60	0.115	(0.187)	0.030	0.085
143	11.92	0.60	0.115	(0.186)	0.030	0.085
144	12.00	0.60	0.115	(0.185)	0.030	0.085
145	12.08	0.83	0.160	(0.185)	0.042	0.118
146	12.17	0.83	0.160	(0.184)	0.042	0.118
147	12.25	0.83	0.160	(0.183)	0.042	0.118
148	12.33	0.87	0.166	(0.182)	0.043	0.123
149	12.42	0.87	0.166	(0.181)	0.043	0.123
150	12.50	0.87	0.166	(0.180)	0.043	0.123
151	12.58	0.93	0.179	(0.179)	0.047	0.133
152	12.67	0.93	0.179	(0.178)	0.047	0.133
153	12.75	0.93	0.179	(0.177)	0.047	0.133
154	12.83	0.97	0.186	(0.176)	0.048	0.137
155	12.92	0.97	0.186	(0.175)	0.048	0.137
156	13.00	0.97	0.186	(0.175)	0.048	0.137
157	13.08	1.13	0.218	(0.174)	0.057	0.161
158	13.17	1.13	0.218	(0.173)	0.057	0.161
159	13.25	1.13	0.218	(0.172)	0.057	0.161
160	13.33	1.13	0.218	(0.171)	0.057	0.161
161	13.42	1.13	0.218	(0.170)	0.057	0.161

162	13.50	1.13	0.218	(0.169)	0.057	0.161
163	13.58	0.77	0.147	(0.168)	0.038	0.109
164	13.67	0.77	0.147	(0.168)	0.038	0.109
165	13.75	0.77	0.147	(0.167)	0.038	0.109
166	13.83	0.77	0.147	(0.166)	0.038	0.109
167	13.92	0.77	0.147	(0.165)	0.038	0.109
168	14.00	0.77	0.147	(0.164)	0.038	0.109
169	14.08	0.90	0.173	(0.163)	0.045	0.128
170	14.17	0.90	0.173	(0.163)	0.045	0.128
171	14.25	0.90	0.173	(0.162)	0.045	0.128
172	14.33	0.87	0.166	(0.161)	0.043	0.123
173	14.42	0.87	0.166	(0.160)	0.043	0.123
174	14.50	0.87	0.166	(0.159)	0.043	0.123
175	14.58	0.87	0.166	(0.158)	0.043	0.123
176	14.67	0.87	0.166	(0.158)	0.043	0.123
177	14.75	0.87	0.166	(0.157)	0.043	0.123
178	14.83	0.83	0.160	(0.156)	0.042	0.118
179	14.92	0.83	0.160	(0.155)	0.042	0.118
180	15.00	0.83	0.160	(0.154)	0.042	0.118
181	15.08	0.80	0.154	(0.154)	0.040	0.114
182	15.17	0.80	0.154	(0.153)	0.040	0.114
183	15.25	0.80	0.154	(0.152)	0.040	0.114
184	15.33	0.77	0.147	(0.151)	0.038	0.109
185	15.42	0.77	0.147	(0.150)	0.038	0.109
186	15.50	0.77	0.147	(0.150)	0.038	0.109
187	15.58	0.63	0.122	(0.149)	0.032	0.090
188	15.67	0.63	0.122	(0.148)	0.032	0.090
189	15.75	0.63	0.122	(0.147)	0.032	0.090
190	15.83	0.63	0.122	(0.147)	0.032	0.090
191	15.92	0.63	0.122	(0.146)	0.032	0.090
192	16.00	0.63	0.122	(0.145)	0.032	0.090
193	16.08	0.13	0.026	(0.144)	0.007	0.019
194	16.17	0.13	0.026	(0.144)	0.007	0.019
195	16.25	0.13	0.026	(0.143)	0.007	0.019
196	16.33	0.13	0.026	(0.142)	0.007	0.019
197	16.42	0.13	0.026	(0.141)	0.007	0.019
198	16.50	0.13	0.026	(0.141)	0.007	0.019
199	16.58	0.10	0.019	(0.140)	0.005	0.014
200	16.67	0.10	0.019	(0.139)	0.005	0.014
201	16.75	0.10	0.019	(0.139)	0.005	0.014
202	16.83	0.10	0.019	(0.138)	0.005	0.014
203	16.92	0.10	0.019	(0.137)	0.005	0.014
204	17.00	0.10	0.019	(0.137)	0.005	0.014
205	17.08	0.17	0.032	(0.136)	0.008	0.024
206	17.17	0.17	0.032	(0.135)	0.008	0.024
207	17.25	0.17	0.032	(0.134)	0.008	0.024
208	17.33	0.17	0.032	(0.134)	0.008	0.024
209	17.42	0.17	0.032	(0.133)	0.008	0.024
210	17.50	0.17	0.032	(0.132)	0.008	0.024
211	17.58	0.17	0.032	(0.132)	0.008	0.024
212	17.67	0.17	0.032	(0.131)	0.008	0.024
213	17.75	0.17	0.032	(0.131)	0.008	0.024
214	17.83	0.13	0.026	(0.130)	0.007	0.019
215	17.92	0.13	0.026	(0.129)	0.007	0.019
216	18.00	0.13	0.026	(0.129)	0.007	0.019
217	18.08	0.13	0.026	(0.128)	0.007	0.019
218	18.17	0.13	0.026	(0.127)	0.007	0.019
219	18.25	0.13	0.026	(0.127)	0.007	0.019
220	18.33	0.13	0.026	(0.126)	0.007	0.019
221	18.42	0.13	0.026	(0.125)	0.007	0.019
222	18.50	0.13	0.026	(0.125)	0.007	0.019
223	18.58	0.10	0.019	(0.124)	0.005	0.014
224	18.67	0.10	0.019	(0.124)	0.005	0.014
225	18.75	0.10	0.019	(0.123)	0.005	0.014
226	18.83	0.07	0.013	(0.122)	0.003	0.009
227	18.92	0.07	0.013	(0.122)	0.003	0.009
228	19.00	0.07	0.013	(0.121)	0.003	0.009
229	19.08	0.10	0.019	(0.121)	0.005	0.014
230	19.17	0.10	0.019	(0.120)	0.005	0.014
231	19.25	0.10	0.019	(0.120)	0.005	0.014
232	19.33	0.13	0.026	(0.119)	0.007	0.019
233	19.42	0.13	0.026	(0.118)	0.007	0.019
234	19.50	0.13	0.026	(0.118)	0.007	0.019
235	19.58	0.10	0.019	(0.117)	0.005	0.014
236	19.67	0.10	0.019	(0.117)	0.005	0.014
237	19.75	0.10	0.019	(0.116)	0.005	0.014
238	19.83	0.07	0.013	(0.116)	0.003	0.009
239	19.92	0.07	0.013	(0.115)	0.003	0.009
240	20.00	0.07	0.013	(0.115)	0.003	0.009
241	20.08	0.10	0.019	(0.114)	0.005	0.014
242	20.17	0.10	0.019	(0.114)	0.005	0.014
243	20.25	0.10	0.019	(0.113)	0.005	0.014
244	20.33	0.10	0.019	(0.113)	0.005	0.014
245	20.42	0.10	0.019	(0.112)	0.005	0.014
246	20.50	0.10	0.019	(0.112)	0.005	0.014
247	20.58	0.10	0.019	(0.111)	0.005	0.014
248	20.67	0.10	0.019	(0.111)	0.005	0.014

249	20.75	0.10	0.019	(	0.110)	0.005	0.014
250	20.83	0.07	0.013	(	0.110)	0.003	0.009
251	20.92	0.07	0.013	(	0.110)	0.003	0.009
252	21.00	0.07	0.013	(	0.109)	0.003	0.009
253	21.08	0.10	0.019	(	0.109)	0.005	0.014
254	21.17	0.10	0.019	(	0.108)	0.005	0.014
255	21.25	0.10	0.019	(	0.108)	0.005	0.014
256	21.33	0.07	0.013	(	0.107)	0.003	0.009
257	21.42	0.07	0.013	(	0.107)	0.003	0.009
258	21.50	0.07	0.013	(	0.107)	0.003	0.009
259	21.58	0.10	0.019	(	0.106)	0.005	0.014
260	21.67	0.10	0.019	(	0.106)	0.005	0.014
261	21.75	0.10	0.019	(	0.105)	0.005	0.014
262	21.83	0.07	0.013	(	0.105)	0.003	0.009
263	21.92	0.07	0.013	(	0.105)	0.003	0.009
264	22.00	0.07	0.013	(	0.104)	0.003	0.009
265	22.08	0.10	0.019	(	0.104)	0.005	0.014
266	22.17	0.10	0.019	(	0.104)	0.005	0.014
267	22.25	0.10	0.019	(	0.103)	0.005	0.014
268	22.33	0.07	0.013	(	0.103)	0.003	0.009
269	22.42	0.07	0.013	(	0.103)	0.003	0.009
270	22.50	0.07	0.013	(	0.102)	0.003	0.009
271	22.58	0.07	0.013	(	0.102)	0.003	0.009
272	22.67	0.07	0.013	(	0.102)	0.003	0.009
273	22.75	0.07	0.013	(	0.102)	0.003	0.009
274	22.83	0.07	0.013	(	0.101)	0.003	0.009
275	22.92	0.07	0.013	(	0.101)	0.003	0.009
276	23.00	0.07	0.013	(	0.101)	0.003	0.009
277	23.08	0.07	0.013	(	0.101)	0.003	0.009
278	23.17	0.07	0.013	(	0.100)	0.003	0.009
279	23.25	0.07	0.013	(	0.100)	0.003	0.009
280	23.33	0.07	0.013	(	0.100)	0.003	0.009
281	23.42	0.07	0.013	(	0.100)	0.003	0.009
282	23.50	0.07	0.013	(	0.100)	0.003	0.009
283	23.58	0.07	0.013	(	0.099)	0.003	0.009
284	23.67	0.07	0.013	(	0.099)	0.003	0.009
285	23.75	0.07	0.013	(	0.099)	0.003	0.009
286	23.83	0.07	0.013	(	0.099)	0.003	0.009
287	23.92	0.07	0.013	(	0.099)	0.003	0.009
288	24.00	0.07	0.013	(	0.099)	0.003	0.009

(Loss Rate Not Used)

Sum = 100.0 Sum = 14.2

Flood volume = Effective rainfall 1.18(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 0.42(In)
Total soil loss = 0.278(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 34511.8 Cubic Feet
Total soil loss = 12125.8 Cubic Feet

Peak flow rate of this hydrograph = 1.304(CFS)

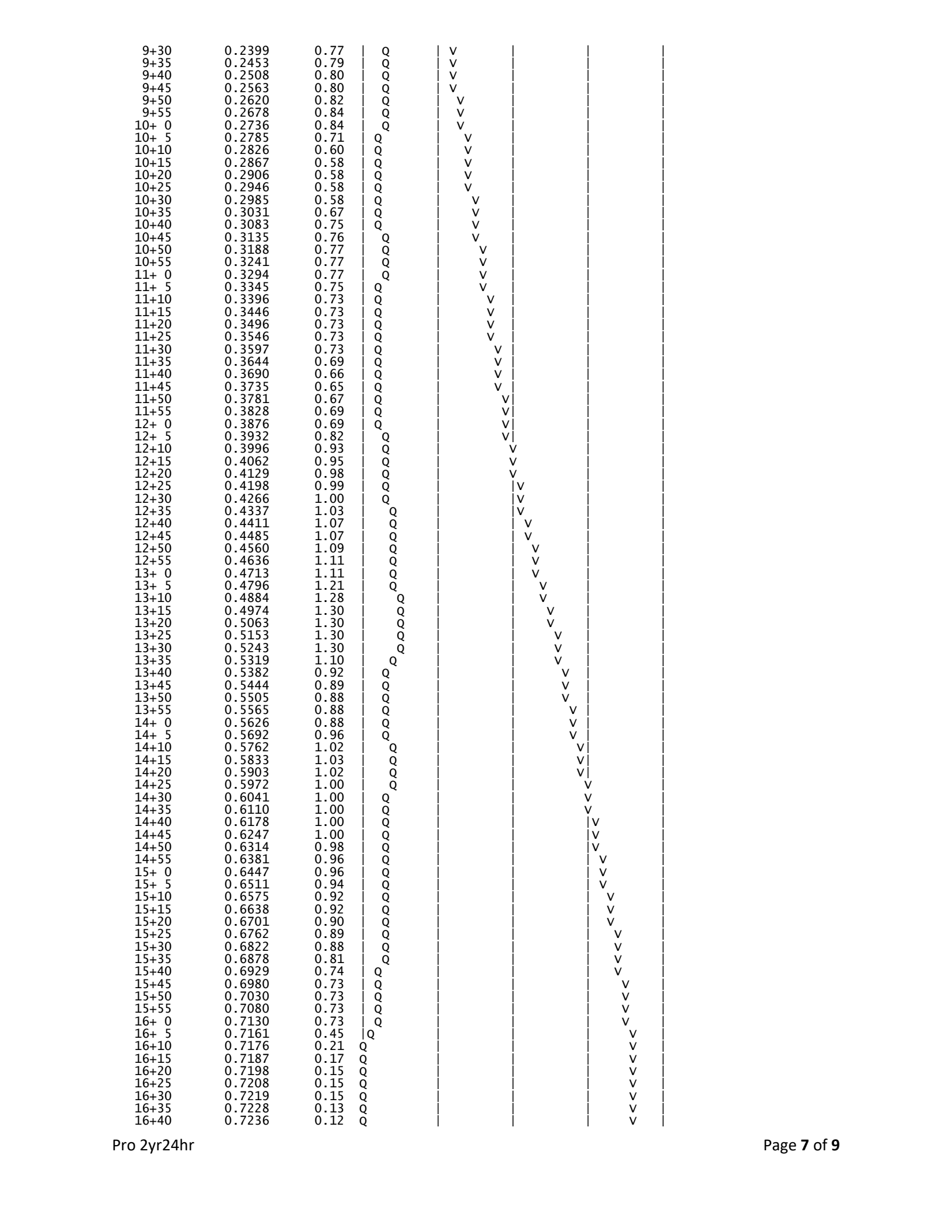
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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0003	0.04	Q				
0+10	0.0007	0.07	Q				
0+15	0.0012	0.07	Q				
0+20	0.0019	0.10	Q				
0+25	0.0027	0.11	Q				
0+30	0.0035	0.11	Q				
0+35	0.0042	0.12	Q				
0+40	0.0050	0.12	Q				
0+45	0.0058	0.12	Q				
0+50	0.0068	0.13	Q				
0+55	0.0078	0.15	Q				
1+ 0	0.0088	0.15	Q				
1+ 5	0.0098	0.13	Q				
1+10	0.0106	0.12	Q				
1+15	0.0114	0.12	Q				
1+20	0.0122	0.12	Q				
1+25	0.0130	0.12	Q				
1+30	0.0138	0.12	Q				
1+35	0.0145	0.12	Q				
1+40	0.0153	0.12	Q				
1+45	0.0161	0.12	Q				
1+50	0.0171	0.13	Q				
1+55	0.0181	0.15	Q				
2+ 0	0.0191	0.15	Q				
2+ 5	0.0202	0.15	QV				
2+10	0.0212	0.15	QV				

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2+15       0.0223      0.15  QV        |         |         |         |
2+20       0.0234      0.15  QV        |         |         |         |
2+25       0.0244      0.15  QV        |         |         |         |
2+30       0.0255      0.15  QV        |         |         |         |
2+35       0.0267      0.17  QV        |         |         |         |
2+40       0.0280      0.19  QV        |         |         |         |
2+45       0.0293      0.19  QV        |         |         |         |
2+50       0.0306      0.19  QV        |         |         |         |
2+55       0.0319      0.19  QV        |         |         |         |
3+ 0       0.0332      0.19  QV        |         |         |         |
3+ 5       0.0345      0.19  QV        |         |         |         |
3+10       0.0359      0.19  QV        |         |         |         |
3+15       0.0372      0.19  QV        |         |         |         |
3+20       0.0385      0.19  QV        |         |         |         |
3+25       0.0398      0.19  Q V       |         |         |         |
3+30       0.0411      0.19  Q V       |         |         |         |
3+35       0.0425      0.19  Q V       |         |         |         |
3+40       0.0438      0.19  Q V       |         |         |         |
3+45       0.0451      0.19  Q V       |         |         |         |
3+50       0.0466      0.21  Q V       |         |         |         |
3+55       0.0481      0.23  Q V       |         |         |         |
4+ 0       0.0497      0.23  Q V       |         |         |         |
4+ 5       0.0513      0.23  Q V       |         |         |         |
4+10       0.0529      0.23  Q V       |         |         |         |
4+15       0.0544      0.23  Q V       |         |         |         |
4+20       0.0562      0.25  Q V       |         |         |         |
4+25       0.0580      0.26  |QV       |         |         |         |
4+30       0.0598      0.27  |Q V       |         |         |         |
4+35       0.0617      0.27  |Q V       |         |         |         |
4+40       0.0635      0.27  |Q V       |         |         |         |
4+45       0.0654      0.27  |Q V       |         |         |         |
4+50       0.0673      0.29  |Q V       |         |         |         |
4+55       0.0694      0.30  |Q V       |         |         |         |
5+ 0       0.0715      0.31  |Q V       |         |         |         |
5+ 5       0.0734      0.27  |Q V       |         |         |         |
5+10       0.0750      0.24  Q  V       |         |         |         |
5+15       0.0766      0.23  Q  V       |         |         |         |
5+20       0.0783      0.25  Q  V       |         |         |         |
5+25       0.0802      0.26  |Q  V       |         |         |         |
5+30       0.0820      0.27  |Q  V       |         |         |         |
5+35       0.0840      0.29  |Q  V       |         |         |         |
5+40       0.0861      0.30  |Q  V       |         |         |         |
5+45       0.0882      0.31  |Q  V       |         |         |         |
5+50       0.0903      0.31  |Q  V       |         |         |         |
5+55       0.0924      0.31  |Q  V       |         |         |         |
6+ 0       0.0945      0.31  |Q  V       |         |         |         |
6+ 5       0.0968      0.33  |Q  V       |         |         |         |
6+10       0.0991      0.34  |Q   V      |         |         |         |
6+15       0.1015      0.34  |Q   V      |         |         |         |
6+20       0.1039      0.35  |Q   V      |         |         |         |
6+25       0.1062      0.35  |Q   V      |         |         |         |
6+30       0.1086      0.35  |Q   V      |         |         |         |
6+35       0.1111      0.36  |Q   V      |         |         |         |
6+40       0.1137      0.38  |Q   V      |         |         |         |
6+45       0.1164      0.38  |Q   V      |         |         |         |
6+50       0.1190      0.38  |Q    V     |         |         |         |
6+55       0.1216      0.38  |Q    V     |         |         |         |
7+ 0       0.1243      0.38  |Q    V     |         |         |         |
7+ 5       0.1269      0.38  |Q    V     |         |         |         |
7+10       0.1296      0.38  |Q    V     |         |         |         |
7+15       0.1322      0.38  |Q    V     |         |         |         |
7+20       0.1350      0.40  |Q    V     |         |         |         |
7+25       0.1379      0.42  |Q    V     |         |         |         |
7+30       0.1408      0.42  |Q     V    |         |         |         |
7+35       0.1438      0.44  |Q     V    |         |         |         |
7+40       0.1469      0.46  |Q     V    |         |         |         |
7+45       0.1501      0.46  |Q     V    |         |         |         |
7+50       0.1534      0.48  |Q     V    |         |         |         |
7+55       0.1568      0.49  |Q     V    |         |         |         |
8+ 0       0.1602      0.50  |Q      V   |         |         |         |
8+ 5       0.1639      0.54  | Q     V   |         |         |         |
8+10       0.1678      0.57  | Q     V   |         |         |         |
8+15       0.1718      0.57  | Q     V   |         |         |         |
8+20       0.1757      0.58  | Q     V   |         |         |         |
8+25       0.1797      0.58  | Q      V  |         |         |         |
8+30       0.1837      0.58  | Q      V  |         |         |         |
8+35       0.1877      0.59  | Q      V  |         |         |         |
8+40       0.1919      0.61  | Q      V  |         |         |         |
8+45       0.1962      0.61  | Q      V  |         |         |         |
8+50       0.2005      0.63  | Q       V |         |         |         |
8+55       0.2050      0.65  | Q       V |         |         |         |
9+ 0       0.2095      0.65  | Q       V |         |         |         |
9+ 5       0.2142      0.69  | Q       V |         |         |         |
9+10       0.2192      0.72  | Q        |V         |         |         |
9+15       0.2242      0.73  | Q        |V         |         |         |
9+20       0.2293      0.75  | Q        |V         |         |         |
9+25       0.2346      0.76  |  Q       |V         |         |         |
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9+30	0.2399	0.77	Q	V			
9+35	0.2453	0.79	Q	V			
9+40	0.2508	0.80	Q	V			
9+45	0.2563	0.80	Q	V			
9+50	0.2620	0.82	Q	V			
9+55	0.2678	0.84	Q	V			
10+ 0	0.2736	0.84	Q	V			
10+ 5	0.2785	0.71	Q	V			
10+10	0.2826	0.60	Q	V			
10+15	0.2867	0.58	Q	V			
10+20	0.2906	0.58	Q	V			
10+25	0.2946	0.58	Q	V			
10+30	0.2985	0.58	Q	V			
10+35	0.3031	0.67	Q	V			
10+40	0.3083	0.75	Q	V			
10+45	0.3135	0.76	Q	V			
10+50	0.3188	0.77	Q	V			
10+55	0.3241	0.77	Q	V			
11+ 0	0.3294	0.77	Q	V			
11+ 5	0.3345	0.75	Q	V			
11+10	0.3396	0.73	Q	V			
11+15	0.3446	0.73	Q	V			
11+20	0.3496	0.73	Q	V			
11+25	0.3546	0.73	Q	V			
11+30	0.3597	0.73	Q	V			
11+35	0.3644	0.69	Q	V			
11+40	0.3690	0.66	Q	V			
11+45	0.3735	0.65	Q	V			
11+50	0.3781	0.67	Q	V			
11+55	0.3828	0.69	Q	V			
12+ 0	0.3876	0.69	Q	V			
12+ 5	0.3932	0.82	Q	V			
12+10	0.3996	0.93	Q	V			
12+15	0.4062	0.95	Q	V			
12+20	0.4129	0.98	Q	V			
12+25	0.4198	0.99	Q	V			
12+30	0.4266	1.00	Q	V			
12+35	0.4337	1.03	Q	V			
12+40	0.4411	1.07	Q	V			
12+45	0.4485	1.07	Q	V			
12+50	0.4560	1.09	Q	V			
12+55	0.4636	1.11	Q	V			
13+ 0	0.4713	1.11	Q	V			
13+ 5	0.4796	1.21	Q	V			
13+10	0.4884	1.28	Q	V			
13+15	0.4974	1.30	Q	V			
13+20	0.5063	1.30	Q	V			
13+25	0.5153	1.30	Q	V			
13+30	0.5243	1.30	Q	V			
13+35	0.5319	1.10	Q	V			
13+40	0.5382	0.92	Q	V			
13+45	0.5444	0.89	Q	V			
13+50	0.5505	0.88	Q	V			
13+55	0.5565	0.88	Q	V			
14+ 0	0.5626	0.88	Q	V			
14+ 5	0.5692	0.96	Q	V			
14+10	0.5762	1.02	Q	V			
14+15	0.5833	1.03	Q	V			
14+20	0.5903	1.02	Q	V			
14+25	0.5972	1.00	Q	V			
14+30	0.6041	1.00	Q	V			
14+35	0.6110	1.00	Q	V			
14+40	0.6178	1.00	Q	V			
14+45	0.6247	1.00	Q	V			
14+50	0.6314	0.98	Q	V			
14+55	0.6381	0.96	Q	V			
15+ 0	0.6447	0.96	Q	V			
15+ 5	0.6511	0.94	Q	V			
15+10	0.6575	0.92	Q	V			
15+15	0.6638	0.92	Q	V			
15+20	0.6701	0.90	Q	V			
15+25	0.6762	0.89	Q	V			
15+30	0.6822	0.88	Q	V			
15+35	0.6878	0.81	Q	V			
15+40	0.6929	0.74	Q	V			
15+45	0.6980	0.73	Q	V			
15+50	0.7030	0.73	Q	V			
15+55	0.7080	0.73	Q	V			
16+ 0	0.7130	0.73	Q	V			
16+ 5	0.7161	0.45	Q	V			
16+10	0.7176	0.21	Q	V			
16+15	0.7187	0.17	Q	V			
16+20	0.7198	0.15	Q	V			
16+25	0.7208	0.15	Q	V			
16+30	0.7219	0.15	Q	V			
16+35	0.7228	0.13	Q	V			
16+40	0.7236	0.12	Q	V			

16+45	0.7244	0.12	Q	|	|	|	V |
16+50	0.7252	0.12	Q	|	|	|	V |
16+55	0.7260	0.12	Q	|	|	|	V |
17+ 0	0.7268	0.12	Q	|	|	|	V |
17+ 5	0.7279	0.15	Q	|	|	|	V |
17+10	0.7291	0.18	Q	|	|	|	V |
17+15	0.7304	0.19	Q	|	|	|	V |
17+20	0.7318	0.19	Q	|	|	|	V |
17+25	0.7331	0.19	Q	|	|	|	V |
17+30	0.7344	0.19	Q	|	|	|	V |
17+35	0.7357	0.19	Q	|	|	|	V |
17+40	0.7370	0.19	Q	|	|	|	V |
17+45	0.7384	0.19	Q	|	|	|	V |
17+50	0.7395	0.17	Q	|	|	|	V |
17+55	0.7406	0.16	Q	|	|	|	V |
18+ 0	0.7417	0.15	Q	|	|	|	V |
18+ 5	0.7427	0.15	Q	|	|	|	V |
18+10	0.7438	0.15	Q	|	|	|	V |
18+15	0.7449	0.15	Q	|	|	|	V |
18+20	0.7459	0.15	Q	|	|	|	V |
18+25	0.7470	0.15	Q	|	|	|	V |
18+30	0.7480	0.15	Q	|	|	|	V |
18+35	0.7490	0.13	Q	|	|	|	V |
18+40	0.7498	0.12	Q	|	|	|	V |
18+45	0.7506	0.12	Q	|	|	|	V |
18+50	0.7512	0.10	Q	|	|	|	V |
18+55	0.7518	0.08	Q	|	|	|	V |
19+ 0	0.7523	0.08	Q	|	|	|	V |
19+ 5	0.7530	0.10	Q	|	|	|	V |
19+10	0.7538	0.11	Q	|	|	|	V |
19+15	0.7545	0.11	Q	|	|	|	V |
19+20	0.7555	0.13	Q	|	|	|	V |
19+25	0.7565	0.15	Q	|	|	|	V |
19+30	0.7575	0.15	Q	|	|	|	V |
19+35	0.7585	0.13	Q	|	|	|	V |
19+40	0.7593	0.12	Q	|	|	|	V |
19+45	0.7601	0.12	Q	|	|	|	V |
19+50	0.7607	0.10	Q	|	|	|	V |
19+55	0.7613	0.08	Q	|	|	|	V |
20+ 0	0.7618	0.08	Q	|	|	|	V |
20+ 5	0.7625	0.10	Q	|	|	|	V |
20+10	0.7633	0.11	Q	|	|	|	V |
20+15	0.7640	0.11	Q	|	|	|	V |
20+20	0.7648	0.12	Q	|	|	|	V |
20+25	0.7656	0.12	Q	|	|	|	V |
20+30	0.7664	0.12	Q	|	|	|	V |
20+35	0.7672	0.12	Q	|	|	|	V |
20+40	0.7680	0.12	Q	|	|	|	V |
20+45	0.7688	0.12	Q	|	|	|	V |
20+50	0.7695	0.10	Q	|	|	|	V |
20+55	0.7700	0.08	Q	|	|	|	V |
21+ 0	0.7706	0.08	Q	|	|	|	V |
21+ 5	0.7712	0.10	Q	|	|	|	V |
21+10	0.7720	0.11	Q	|	|	|	V |
21+15	0.7728	0.11	Q	|	|	|	V|
21+20	0.7734	0.10	Q	|	|	|	V|
21+25	0.7740	0.08	Q	|	|	|	V|
21+30	0.7745	0.08	Q	|	|	|	V|
21+35	0.7752	0.10	Q	|	|	|	V|
21+40	0.7759	0.11	Q	|	|	|	V|
21+45	0.7767	0.11	Q	|	|	|	V|
21+50	0.7774	0.10	Q	|	|	|	V|
21+55	0.7779	0.08	Q	|	|	|	V|
22+ 0	0.7785	0.08	Q	|	|	|	V|
22+ 5	0.7791	0.10	Q	|	|	|	V|
22+10	0.7799	0.11	Q	|	|	|	V|
22+15	0.7807	0.11	Q	|	|	|	V|
22+20	0.7813	0.10	Q	|	|	|	V|
22+25	0.7819	0.08	Q	|	|	|	V|
22+30	0.7824	0.08	Q	|	|	|	V|
22+35	0.7830	0.08	Q	|	|	|	V|
22+40	0.7835	0.08	Q	|	|	|	V|
22+45	0.7840	0.08	Q	|	|	|	V|
22+50	0.7845	0.08	Q	|	|	|	V|
22+55	0.7851	0.08	Q	|	|	|	V|
23+ 0	0.7856	0.08	Q	|	|	|	V|
23+ 5	0.7861	0.08	Q	|	|	|	V|
23+10	0.7867	0.08	Q	|	|	|	V|
23+15	0.7872	0.08	Q	|	|	|	V|
23+20	0.7877	0.08	Q	|	|	|	V|
23+25	0.7882	0.08	Q	|	|	|	V|
23+30	0.7888	0.08	Q	|	|	|	V|
23+35	0.7893	0.08	Q	|	|	|	V|
23+40	0.7898	0.08	Q	|	|	|	V|
23+45	0.7904	0.08	Q	|	|	|	V|
23+50	0.7909	0.08	Q	|	|	|	V|
23+55	0.7914	0.08	Q	|	|	|	V|

```
   24+ 0       0.7919      0.08  Q         |         |         |        v|
   24+ 5       0.7922      0.04  Q         |         |         |        v|
   24+10       0.7923      0.01  Q         |         |         |        v|
   24+15       0.7923      0.00  Q         |         |         |        v|
-------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 06/06/22 File: PRO515.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 987.00(Ft.)
Length along longest watercourse measured to centroid = 494.00(Ft.)
Length along longest watercourse = 0.187 Mi.
Length along longest watercourse measured to centroid = 0.094 Mi.
Difference in elevation = 11.42(Ft.)
Slope along watercourse = 61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.035 Hr.
Lag time = 2.13 Min.
25% of lag time = 0.53 Min.
40% of lag time = 0.85 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]
8.03	0.50	4.01

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	1.30	10.44

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 0.687(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.687(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	56.00	0.800

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	36.0	0.706	0.800	0.198	1.000	0.198
					Sum (F) =	0.198

Area averaged mean soil loss (F) (In/Hr) = 0.198
Minimum soil loss rate ((In/Hr)) = 0.099
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.5000

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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	4.20	0.346	(0.198)	0.090	0.256
2	0.17	4.30	0.355	(0.198)	0.092	0.262
3	0.25	5.00	0.412	(0.198)	0.107	0.305
4	0.33	5.00	0.412	(0.198)	0.107	0.305
5	0.42	5.80	0.478	(0.198)	0.124	0.354
6	0.50	6.50	0.536	(0.198)	0.139	0.397
7	0.58	7.40	0.610	(0.198)	0.159	0.452
8	0.67	8.60	0.709	(0.198)	0.184	0.525
9	0.75	12.30	1.014	0.198	(0.264)	0.817
10	0.83	29.10	2.400	0.198	(0.624)	2.202
11	0.92	6.80	0.561	(0.198)	0.146	0.415
12	1.00	5.00	0.412	(0.198)	0.107	0.305
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	6.6

Flood volume = Effective rainfall 0.55(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.4(Ac.Ft)
Total soil loss = 0.14(In)
Total soil loss = 0.092(Ac.Ft)
Total rainfall = 0.69(In)
Flood volume = 16022.0 Cubic Feet
Total soil loss = 4012.9 Cubic Feet

Peak flow rate of this hydrograph = 11.846(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	5.0	10.0	15.0	20.0
0+ 5	0.0070	1.02	V Q				
0+10	0.0200	1.89	| VQ				
0+15	0.0354	2.24	| VQ				
0+20	0.0522	2.43	| QV				
0+25	0.0705	2.66	| Q V				
0+30	0.0911	3.00	| Q V|				
0+35	0.1144	3.38	| Q | V				
0+40	0.1412	3.89	| Q | V				
0+45	0.1779	5.33	| Q V|				
0+50	0.2595	11.85	| | | Q V |				
0+55	0.3254	9.56	| | Q| | V |				
1+ 0	0.3536	4.10	| Q | | V |				
1+ 5	0.3655	1.73	| Q | | V|				
1+10	0.3674	0.27	Q | | V|				
1+15	0.3678	0.06	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  06/06/22 File: PRO535.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =    5.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.034(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.034(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-1     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  36.0      0.706     0.800        0.198       1.000      0.198
                                                 Sum (F) =   0.198
Area averaged mean soil loss (F) (In/Hr) =  0.198
Minimum soil loss rate ((In/Hr)) =  0.099
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	0.161	(0.198)	0.042	0.119
2	0.17	1.30	0.161	(0.198)	0.042	0.119
3	0.25	1.10	0.137	(0.198)	0.035	0.101
4	0.33	1.50	0.186	(0.198)	0.048	0.138
5	0.42	1.50	0.186	(0.198)	0.048	0.138
6	0.50	1.80	0.223	(0.198)	0.058	0.165
7	0.58	1.50	0.186	(0.198)	0.048	0.138
8	0.67	1.80	0.223	(0.198)	0.058	0.165
9	0.75	1.80	0.223	(0.198)	0.058	0.165
10	0.83	1.50	0.186	(0.198)	0.048	0.138
11	0.92	1.60	0.199	(0.198)	0.052	0.147
12	1.00	1.80	0.223	(0.198)	0.058	0.165
13	1.08	2.20	0.273	(0.198)	0.071	0.202
14	1.17	2.20	0.273	(0.198)	0.071	0.202
15	1.25	2.20	0.273	(0.198)	0.071	0.202
16	1.33	2.00	0.248	(0.198)	0.065	0.184
17	1.42	2.60	0.323	(0.198)	0.084	0.239
18	1.50	2.70	0.335	(0.198)	0.087	0.248
19	1.58	2.40	0.298	(0.198)	0.077	0.220
20	1.67	2.70	0.335	(0.198)	0.087	0.248
21	1.75	3.30	0.410	(0.198)	0.106	0.303
22	1.83	3.10	0.385	(0.198)	0.100	0.285
23	1.92	2.90	0.360	(0.198)	0.094	0.266
24	2.00	3.00	0.372	(0.198)	0.097	0.276
25	2.08	3.10	0.385	(0.198)	0.100	0.285
26	2.17	4.20	0.521	(0.198)	0.136	0.386
27	2.25	5.00	0.621	(0.198)	0.161	0.459
28	2.33	3.50	0.434	(0.198)	0.113	0.321
29	2.42	6.80	0.844	0.198	(0.219)	0.646
30	2.50	7.30	0.906	0.198	(0.236)	0.708
31	2.58	8.20	1.018	0.198	(0.265)	0.820
32	2.67	5.90	0.732	(0.198)	0.190	0.542
33	2.75	2.00	0.248	(0.198)	0.065	0.184
34	2.83	1.80	0.223	(0.198)	0.058	0.165
35	2.92	1.80	0.223	(0.198)	0.058	0.165
36	3.00	0.60	0.074	(0.198)	0.019	0.055
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	9.3

Flood volume = Effective rainfall 0.78(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.26(In)
Total soil loss = 0.173(Ac.Ft)
Total rainfall = 1.03(In)
Flood volume = 22614.9 Cubic Feet
Total soil loss = 7530.5 Cubic Feet

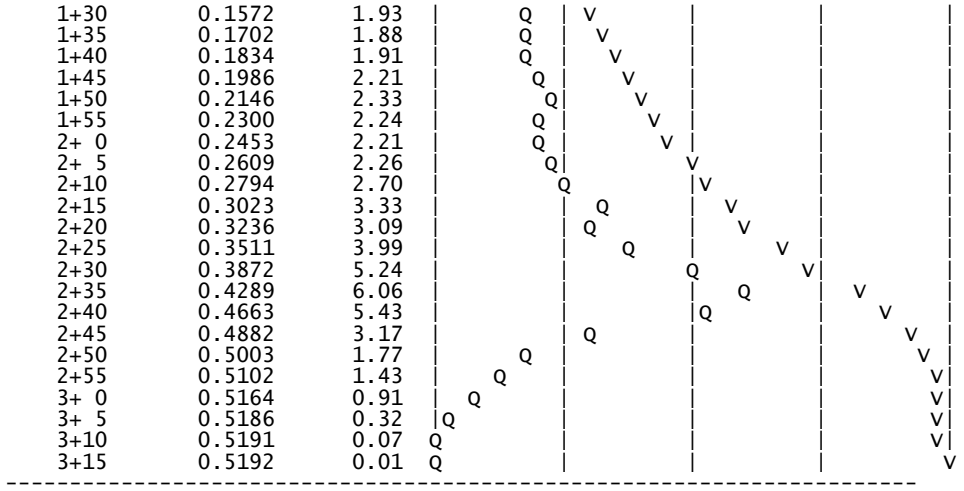
Peak flow rate of this hydrograph = 6.058(CFS)

++

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	2.5	5.0	7.5	10.0
0+ 5	0.0033	0.47	VQ				
0+10	0.0092	0.87	V Q				
0+15	0.0152	0.87	|V Q				
0+20	0.0220	0.98	|V Q				
0+25	0.0295	1.09	| V Q				
0+30	0.0378	1.22	| V Q				
0+35	0.0462	1.21	| VQ				
0+40	0.0547	1.24	| Q				
0+45	0.0638	1.32	| VQ				
0+50	0.0722	1.22	| QV				
0+55	0.0803	1.17	| Q V				
1+ 0	0.0890	1.26	| QV				
1+ 5	0.0991	1.47	| Q V				
1+10	0.1101	1.60	| Q V				
1+15	0.1214	1.63	| Q V|				
1+20	0.1321	1.56	| Q V				
1+25	0.1440	1.72	| Q |V				


1+30 0.1572 1.93
1+35 0.1702 1.88
1+40 0.1834 1.91
1+45 0.1986 2.21
1+50 0.2146 2.33
1+55 0.2300 2.24
2+ 0 0.2453 2.21
2+ 5 0.2609 2.26
2+10 0.2794 2.70
2+15 0.3023 3.33
2+20 0.3236 3.09
2+25 0.3511 3.99
2+30 0.3872 5.24
2+35 0.4289 6.06
2+40 0.4663 5.43
2+45 0.4882 3.17
2+50 0.5003 1.77
2+55 0.5102 1.43
3+ 0 0.5164 0.91
3+ 5 0.5186 0.32
3+10 0.5191 0.07
3+15 0.5192 0.01

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 06/06/22 File: PRO565.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 987.00(Ft.)
Length along longest watercourse measured to centroid = 494.00(Ft.)
Length along longest watercourse = 0.187 Mi.
Length along longest watercourse measured to centroid = 0.094 Mi.
Difference in elevation = 11.42(Ft.)
Slope along watercourse = 61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.035 Hr.
Lag time = 2.13 Min.
25% of lag time = 0.53 Min.
40% of lag time = 0.85 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]
8.03	1.00	8.03

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	2.50	20.07

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.000(In)
Area Averaged 100-Year Rainfall = 2.500(In)

Point rain (area averaged) = 1.351(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.351(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	56.00	0.800

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	36.0	0.706	0.800	0.198	1.000	0.198
					Sum (F) =	0.198

Area averaged mean soil loss (F) (In/Hr) = 0.198
Minimum soil loss rate ((In/Hr)) = 0.099
(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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.081	(0.198)	0.021	0.060
2	0.17	0.60	0.097	(0.198)	0.025	0.072
3	0.25	0.60	0.097	(0.198)	0.025	0.072
4	0.33	0.60	0.097	(0.198)	0.025	0.072
5	0.42	0.60	0.097	(0.198)	0.025	0.072
6	0.50	0.70	0.114	(0.198)	0.030	0.084
7	0.58	0.70	0.114	(0.198)	0.030	0.084
8	0.67	0.70	0.114	(0.198)	0.030	0.084
9	0.75	0.70	0.114	(0.198)	0.030	0.084
10	0.83	0.70	0.114	(0.198)	0.030	0.084
11	0.92	0.70	0.114	(0.198)	0.030	0.084
12	1.00	0.80	0.130	(0.198)	0.034	0.096
13	1.08	0.80	0.130	(0.198)	0.034	0.096
14	1.17	0.80	0.130	(0.198)	0.034	0.096
15	1.25	0.80	0.130	(0.198)	0.034	0.096
16	1.33	0.80	0.130	(0.198)	0.034	0.096
17	1.42	0.80	0.130	(0.198)	0.034	0.096
18	1.50	0.80	0.130	(0.198)	0.034	0.096
19	1.58	0.80	0.130	(0.198)	0.034	0.096
20	1.67	0.80	0.130	(0.198)	0.034	0.096
21	1.75	0.80	0.130	(0.198)	0.034	0.096
22	1.83	0.80	0.130	(0.198)	0.034	0.096
23	1.92	0.80	0.130	(0.198)	0.034	0.096
24	2.00	0.90	0.146	(0.198)	0.038	0.108
25	2.08	0.80	0.130	(0.198)	0.034	0.096
26	2.17	0.90	0.146	(0.198)	0.038	0.108
27	2.25	0.90	0.146	(0.198)	0.038	0.108
28	2.33	0.90	0.146	(0.198)	0.038	0.108
29	2.42	0.90	0.146	(0.198)	0.038	0.108
30	2.50	0.90	0.146	(0.198)	0.038	0.108
31	2.58	0.90	0.146	(0.198)	0.038	0.108
32	2.67	0.90	0.146	(0.198)	0.038	0.108
33	2.75	1.00	0.162	(0.198)	0.042	0.120
34	2.83	1.00	0.162	(0.198)	0.042	0.120
35	2.92	1.00	0.162	(0.198)	0.042	0.120
36	3.00	1.00	0.162	(0.198)	0.042	0.120
37	3.08	1.00	0.162	(0.198)	0.042	0.120
38	3.17	1.10	0.178	(0.198)	0.046	0.132
39	3.25	1.10	0.178	(0.198)	0.046	0.132
40	3.33	1.10	0.178	(0.198)	0.046	0.132
41	3.42	1.20	0.195	(0.198)	0.051	0.144
42	3.50	1.30	0.211	(0.198)	0.055	0.156
43	3.58	1.40	0.227	(0.198)	0.059	0.168
44	3.67	1.40	0.227	(0.198)	0.059	0.168
45	3.75	1.50	0.243	(0.198)	0.063	0.180
46	3.83	1.50	0.243	(0.198)	0.063	0.180
47	3.92	1.60	0.259	(0.198)	0.067	0.192
48	4.00	1.60	0.259	(0.198)	0.067	0.192
49	4.08	1.70	0.276	(0.198)	0.072	0.204
50	4.17	1.80	0.292	(0.198)	0.076	0.216
51	4.25	1.90	0.308	(0.198)	0.080	0.228
52	4.33	2.00	0.324	(0.198)	0.084	0.240
53	4.42	2.10	0.341	(0.198)	0.089	0.252
54	4.50	2.10	0.341	(0.198)	0.089	0.252
55	4.58	2.20	0.357	(0.198)	0.093	0.264
56	4.67	2.30	0.373	(0.198)	0.097	0.276
57	4.75	2.40	0.389	(0.198)	0.101	0.288
58	4.83	2.40	0.389	(0.198)	0.101	0.288
59	4.92	2.50	0.405	(0.198)	0.105	0.300
60	5.00	2.60	0.422	(0.198)	0.110	0.312
61	5.08	3.10	0.503	(0.198)	0.131	0.372
62	5.17	3.60	0.584	(0.198)	0.152	0.432
63	5.25	3.90	0.632	(0.198)	0.164	0.468
64	5.33	4.20	0.681	(0.198)	0.177	0.504
65	5.42	4.70	0.762	0.198	(0.198)	0.564
66	5.50	5.60	0.908	0.198	(0.236)	0.710
67	5.58	1.90	0.308	(0.198)	0.080	0.228
68	5.67	0.90	0.146	(0.198)	0.038	0.108
69	5.75	0.60	0.097	(0.198)	0.025	0.072
70	5.83	0.50	0.081	(0.198)	0.021	0.060
71	5.92	0.30	0.049	(0.198)	0.013	0.036
72	6.00	0.20	0.032	(0.198)	0.008	0.024
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	12.0

```
      Flood volume = Effective rainfall      1.00(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       0.7(Ac.Ft)
      Total soil loss =      0.35(In)
      Total soil loss =     0.233(Ac.Ft)
      Total rainfall =      1.35(In)
      Flood volume =       29242.2 Cubic Feet
      Total soil loss =       10146.6 Cubic Feet
      ---------------------------------------------------------------------------
       Peak flow rate of this hydrograph =      5.091(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        2.5       5.0       7.5      10.0
-------------------------------------------------------------------------------
  0+ 5       0.0016      0.24  Q         |         |         |         |
  0+10       0.0050      0.48  VQ        |         |         |         |
  0+15       0.0088      0.56  V Q       |         |         |         |
  0+20       0.0128      0.58  V Q       |         |         |         |
  0+25       0.0168      0.58  |VQ       |         |         |         |
  0+30       0.0212      0.63  |VQ       |         |         |         |
  0+35       0.0258      0.67  |VQ       |         |         |         |
  0+40       0.0305      0.68  |VQ       |         |         |         |
  0+45       0.0352      0.68  | Q       |         |         |         |
  0+50       0.0398      0.68  | Q       |         |         |         |
  0+55       0.0445      0.68  | Q       |         |         |         |
  1+ 0       0.0495      0.73  | Q       |         |         |         |
  1+ 5       0.0548      0.77  |  Q      |         |         |         |
  1+10       0.0602      0.77  |  Q      |         |         |         |
  1+15       0.0655      0.78  |  Q      |         |         |         |
  1+20       0.0709      0.78  |  QV     |         |         |         |
  1+25       0.0762      0.78  |  QV     |         |         |         |
  1+30       0.0816      0.78  |  QV     |         |         |         |
  1+35       0.0869      0.78  |  Q V    |         |         |         |
  1+40       0.0923      0.78  |  Q V    |         |         |         |
  1+45       0.0976      0.78  |  Q V    |         |         |         |
  1+50       0.1030      0.78  |  Q  V   |         |         |         |
  1+55       0.1083      0.78  |  Q  V   |         |         |         |
  2+ 0       0.1140      0.82  |  Q  V   |         |         |         |
  2+ 5       0.1196      0.82  |  Q   V  |         |         |         |
  2+10       0.1254      0.83  |  Q   V  |         |         |         |
  2+15       0.1313      0.87  |  Q   V  |         |         |         |
  2+20       0.1373      0.87  |  Q    V |         |         |         |
  2+25       0.1434      0.87  |  Q    V |         |         |         |
  2+30       0.1494      0.87  |  Q    V |         |         |         |
  2+35       0.1554      0.87  |  Q     V|         |         |         |
  2+40       0.1614      0.87  |  Q     V|         |         |         |
  2+45       0.1678      0.92  |  Q     V|         |         |         |
  2+50       0.1744      0.96  |  Q      V         |         |         |
  2+55       0.1811      0.97  |  Q      V         |         |         |
  3+ 0       0.1878      0.97  |  Q       |V       |         |         |
  3+ 5       0.1945      0.97  |  Q       |V       |         |         |
  3+10       0.2015      1.02  |   Q      | V      |         |         |
  3+15       0.2088      1.06  |   Q      | V      |         |         |
  3+20       0.2161      1.07  |   Q      | V      |         |         |
  3+25       0.2238      1.12  |   Q      |  V     |         |         |
  3+30       0.2321      1.20  |   Q      |  V     |         |         |
  3+35       0.2410      1.30  |    Q     |   V    |         |         |
  3+40       0.2503      1.35  |    Q     |   V    |         |         |
  3+45       0.2600      1.41  |    Q     |    V   |         |         |
  3+50       0.2700      1.45  |    Q     |     V  |         |         |
  3+55       0.2803      1.50  |     Q    |     V  |         |         |
  4+ 0       0.2910      1.54  |     Q    |      V |         |         |
  4+ 5       0.3020      1.60  |     Q    |      V |         |         |
  4+10       0.3136      1.69  |     Q    |       V|         |         |
  4+15       0.3259      1.78  |      Q   |        V|        |         |
  4+20       0.3388      1.88  |      Q   |         V        |         |
  4+25       0.3525      1.98  |      Q   |         |V       |         |
  4+30       0.3664      2.03  |       Q  |         |V       |         |
  4+35       0.3808      2.09  |       Q  |         | V      |         |
  4+40       0.3958      2.18  |       Q  |         |  V     |         |
  4+45       0.4114      2.27  |        Q |         |   V    |         |
  4+50       0.4274      2.32  |        Q |         |    V   |         |
  4+55       0.4438      2.38  |        Q |         |     V  |         |
  5+ 0       0.4607      2.47  |        Q |         |      V |         |
  5+ 5       0.4797      2.75  |         Q|         |       V|         |
  5+10       0.5017      3.20  |         Q|         |        V|        |
  5+15       0.5264      3.58  |          |Q        |         |V       |
  5+20       0.5532      3.89  |          |Q        |         | V      |
  5+25       0.5826      4.28  |          |  Q      |         |  V     |
  5+30       0.6177      5.09  |          |    Q    |         |   V    |
  5+35       0.6433      3.71  |          |    Q    |         |    V   |
  5+40       0.6552      1.74  |          Q         |         |     V  |
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    5+45       0.6616      0.93  |  Q       |         |         |        v|
    5+50       0.6657      0.59  | Q        |         |         |        v|
    5+55       0.6685      0.41  |Q         |         |         |        v|
    6+ 0       0.6703      0.27  |Q         |         |         |        v|
    6+ 5       0.6711      0.11  Q          |         |         |        v|
    6+10       0.6713      0.02  Q          |         |         |        v|
    6+15       0.6713      0.01  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 06/06/22 File: PRO5245.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 987.00(Ft.)
Length along longest watercourse measured to centroid = 494.00(Ft.)
Length along longest watercourse = 0.187 Mi.
Length along longest watercourse measured to centroid = 0.094 Mi.
Difference in elevation = 11.42(Ft.)
Slope along watercourse = 61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.035 Hr.
Lag time = 2.13 Min.
25% of lag time = 0.53 Min.
40% of lag time = 0.85 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]
8.03	1.60	12.85

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	4.00	32.12

STORM EVENT (YEAR) = 5.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 2.162(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 2.162(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	56.00	0.800

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	36.0	0.706	0.800	0.198	1.000	0.198
					Sum (F) =	0.198

Area averaged mean soil loss (F) (In/Hr) = 0.198
Minimum soil loss rate ((In/Hr)) = 0.099
(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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.017	(0.350)	0.004	0.013
2	0.17	0.07	0.017	(0.349)	0.004	0.013
3	0.25	0.07	0.017	(0.348)	0.004	0.013
4	0.33	0.10	0.026	(0.346)	0.007	0.019
5	0.42	0.10	0.026	(0.345)	0.007	0.019
6	0.50	0.10	0.026	(0.344)	0.007	0.019
7	0.58	0.10	0.026	(0.342)	0.007	0.019
8	0.67	0.10	0.026	(0.341)	0.007	0.019
9	0.75	0.10	0.026	(0.340)	0.007	0.019
10	0.83	0.13	0.035	(0.338)	0.009	0.026
11	0.92	0.13	0.035	(0.337)	0.009	0.026
12	1.00	0.13	0.035	(0.336)	0.009	0.026
13	1.08	0.10	0.026	(0.334)	0.007	0.019
14	1.17	0.10	0.026	(0.333)	0.007	0.019
15	1.25	0.10	0.026	(0.332)	0.007	0.019
16	1.33	0.10	0.026	(0.330)	0.007	0.019
17	1.42	0.10	0.026	(0.329)	0.007	0.019
18	1.50	0.10	0.026	(0.328)	0.007	0.019
19	1.58	0.10	0.026	(0.326)	0.007	0.019
20	1.67	0.10	0.026	(0.325)	0.007	0.019
21	1.75	0.10	0.026	(0.324)	0.007	0.019
22	1.83	0.13	0.035	(0.323)	0.009	0.026
23	1.92	0.13	0.035	(0.321)	0.009	0.026
24	2.00	0.13	0.035	(0.320)	0.009	0.026
25	2.08	0.13	0.035	(0.319)	0.009	0.026
26	2.17	0.13	0.035	(0.317)	0.009	0.026
27	2.25	0.13	0.035	(0.316)	0.009	0.026
28	2.33	0.13	0.035	(0.315)	0.009	0.026
29	2.42	0.13	0.035	(0.313)	0.009	0.026
30	2.50	0.13	0.035	(0.312)	0.009	0.026
31	2.58	0.17	0.043	(0.311)	0.011	0.032
32	2.67	0.17	0.043	(0.310)	0.011	0.032
33	2.75	0.17	0.043	(0.308)	0.011	0.032
34	2.83	0.17	0.043	(0.307)	0.011	0.032
35	2.92	0.17	0.043	(0.306)	0.011	0.032
36	3.00	0.17	0.043	(0.305)	0.011	0.032
37	3.08	0.17	0.043	(0.303)	0.011	0.032
38	3.17	0.17	0.043	(0.302)	0.011	0.032
39	3.25	0.17	0.043	(0.301)	0.011	0.032
40	3.33	0.17	0.043	(0.300)	0.011	0.032
41	3.42	0.17	0.043	(0.298)	0.011	0.032
42	3.50	0.17	0.043	(0.297)	0.011	0.032
43	3.58	0.17	0.043	(0.296)	0.011	0.032
44	3.67	0.17	0.043	(0.295)	0.011	0.032
45	3.75	0.17	0.043	(0.293)	0.011	0.032
46	3.83	0.20	0.052	(0.292)	0.013	0.038
47	3.92	0.20	0.052	(0.291)	0.013	0.038
48	4.00	0.20	0.052	(0.290)	0.013	0.038
49	4.08	0.20	0.052	(0.288)	0.013	0.038
50	4.17	0.20	0.052	(0.287)	0.013	0.038
51	4.25	0.20	0.052	(0.286)	0.013	0.038
52	4.33	0.23	0.061	(0.285)	0.016	0.045
53	4.42	0.23	0.061	(0.284)	0.016	0.045
54	4.50	0.23	0.061	(0.282)	0.016	0.045
55	4.58	0.23	0.061	(0.281)	0.016	0.045
56	4.67	0.23	0.061	(0.280)	0.016	0.045
57	4.75	0.23	0.061	(0.279)	0.016	0.045
58	4.83	0.27	0.069	(0.277)	0.018	0.051
59	4.92	0.27	0.069	(0.276)	0.018	0.051
60	5.00	0.27	0.069	(0.275)	0.018	0.051
61	5.08	0.20	0.052	(0.274)	0.013	0.038
62	5.17	0.20	0.052	(0.273)	0.013	0.038
63	5.25	0.20	0.052	(0.271)	0.013	0.038
64	5.33	0.23	0.061	(0.270)	0.016	0.045
65	5.42	0.23	0.061	(0.269)	0.016	0.045
66	5.50	0.23	0.061	(0.268)	0.016	0.045
67	5.58	0.27	0.069	(0.267)	0.018	0.051
68	5.67	0.27	0.069	(0.266)	0.018	0.051

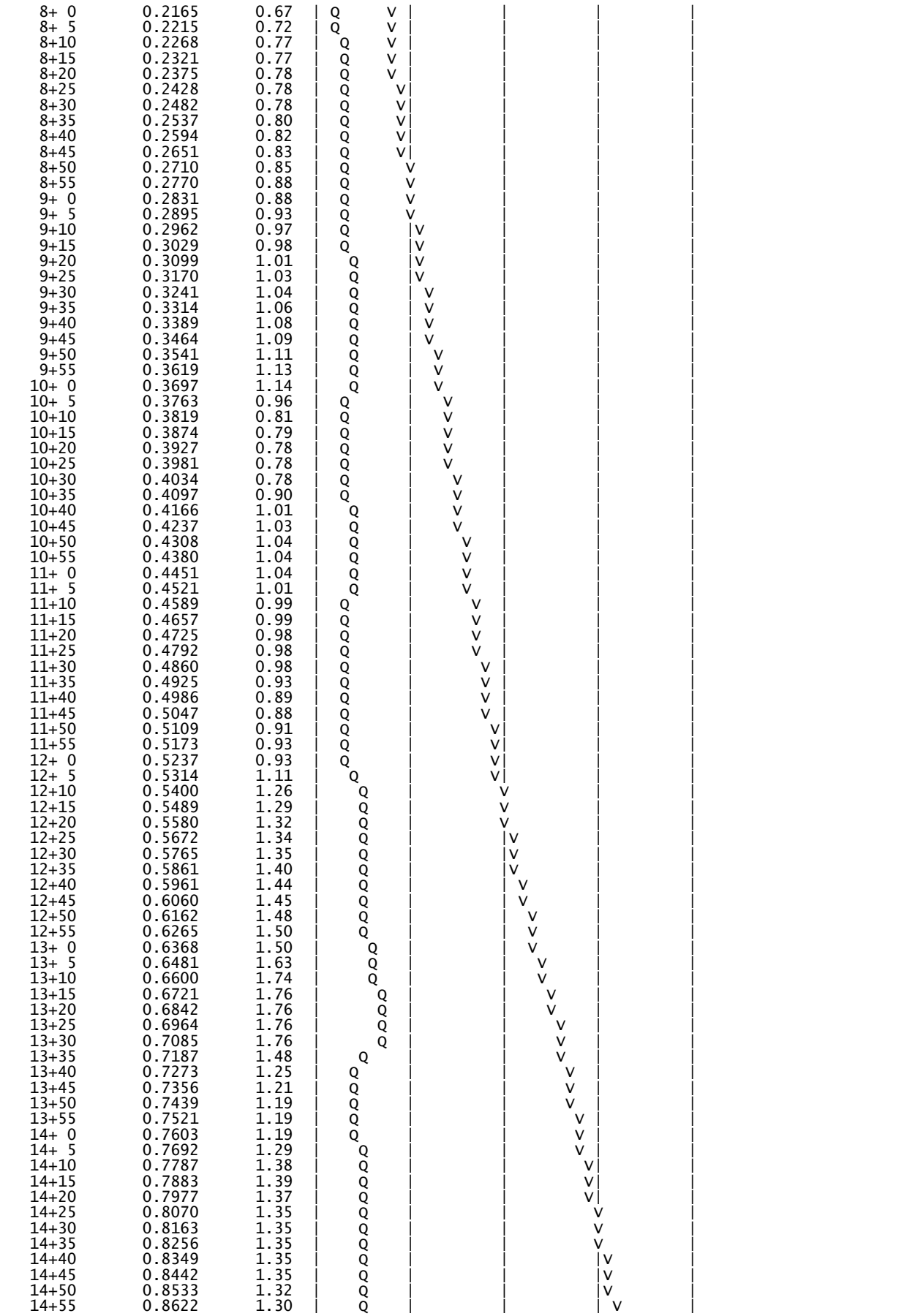
69	5.75	0.27	0.069	(0.264)	0.018	0.051
70	5.83	0.27	0.069	(0.263)	0.018	0.051
71	5.92	0.27	0.069	(0.262)	0.018	0.051
72	6.00	0.27	0.069	(0.261)	0.018	0.051
73	6.08	0.30	0.078	(0.260)	0.020	0.058
74	6.17	0.30	0.078	(0.259)	0.020	0.058
75	6.25	0.30	0.078	(0.257)	0.020	0.058
76	6.33	0.30	0.078	(0.256)	0.020	0.058
77	6.42	0.30	0.078	(0.255)	0.020	0.058
78	6.50	0.30	0.078	(0.254)	0.020	0.058
79	6.58	0.33	0.086	(0.253)	0.022	0.064
80	6.67	0.33	0.086	(0.252)	0.022	0.064
81	6.75	0.33	0.086	(0.251)	0.022	0.064
82	6.83	0.33	0.086	(0.249)	0.022	0.064
83	6.92	0.33	0.086	(0.248)	0.022	0.064
84	7.00	0.33	0.086	(0.247)	0.022	0.064
85	7.08	0.33	0.086	(0.246)	0.022	0.064
86	7.17	0.33	0.086	(0.245)	0.022	0.064
87	7.25	0.33	0.086	(0.244)	0.022	0.064
88	7.33	0.37	0.095	(0.243)	0.025	0.070
89	7.42	0.37	0.095	(0.242)	0.025	0.070
90	7.50	0.37	0.095	(0.241)	0.025	0.070
91	7.58	0.40	0.104	(0.239)	0.027	0.077
92	7.67	0.40	0.104	(0.238)	0.027	0.077
93	7.75	0.40	0.104	(0.237)	0.027	0.077
94	7.83	0.43	0.112	(0.236)	0.029	0.083
95	7.92	0.43	0.112	(0.235)	0.029	0.083
96	8.00	0.43	0.112	(0.234)	0.029	0.083
97	8.08	0.50	0.130	(0.233)	0.034	0.096
98	8.17	0.50	0.130	(0.232)	0.034	0.096
99	8.25	0.50	0.130	(0.231)	0.034	0.096
100	8.33	0.50	0.130	(0.230)	0.034	0.096
101	8.42	0.50	0.130	(0.229)	0.034	0.096
102	8.50	0.50	0.130	(0.227)	0.034	0.096
103	8.58	0.53	0.138	(0.226)	0.036	0.102
104	8.67	0.53	0.138	(0.225)	0.036	0.102
105	8.75	0.53	0.138	(0.224)	0.036	0.102
106	8.83	0.57	0.147	(0.223)	0.038	0.109
107	8.92	0.57	0.147	(0.222)	0.038	0.109
108	9.00	0.57	0.147	(0.221)	0.038	0.109
109	9.08	0.63	0.164	(0.220)	0.043	0.122
110	9.17	0.63	0.164	(0.219)	0.043	0.122
111	9.25	0.63	0.164	(0.218)	0.043	0.122
112	9.33	0.67	0.173	(0.217)	0.045	0.128
113	9.42	0.67	0.173	(0.216)	0.045	0.128
114	9.50	0.67	0.173	(0.215)	0.045	0.128
115	9.58	0.70	0.182	(0.214)	0.047	0.134
116	9.67	0.70	0.182	(0.213)	0.047	0.134
117	9.75	0.70	0.182	(0.212)	0.047	0.134
118	9.83	0.73	0.190	(0.211)	0.049	0.141
119	9.92	0.73	0.190	(0.210)	0.049	0.141
120	10.00	0.73	0.190	(0.209)	0.049	0.141
121	10.08	0.50	0.130	(0.208)	0.034	0.096
122	10.17	0.50	0.130	(0.207)	0.034	0.096
123	10.25	0.50	0.130	(0.206)	0.034	0.096
124	10.33	0.50	0.130	(0.205)	0.034	0.096
125	10.42	0.50	0.130	(0.204)	0.034	0.096
126	10.50	0.50	0.130	(0.203)	0.034	0.096
127	10.58	0.67	0.173	(0.202)	0.045	0.128
128	10.67	0.67	0.173	(0.201)	0.045	0.128
129	10.75	0.67	0.173	(0.200)	0.045	0.128
130	10.83	0.67	0.173	(0.199)	0.045	0.128
131	10.92	0.67	0.173	(0.198)	0.045	0.128
132	11.00	0.67	0.173	(0.197)	0.045	0.128
133	11.08	0.63	0.164	(0.196)	0.043	0.122
134	11.17	0.63	0.164	(0.195)	0.043	0.122
135	11.25	0.63	0.164	(0.194)	0.043	0.122
136	11.33	0.63	0.164	(0.193)	0.043	0.122
137	11.42	0.63	0.164	(0.192)	0.043	0.122
138	11.50	0.63	0.164	(0.191)	0.043	0.122
139	11.58	0.57	0.147	(0.190)	0.038	0.109
140	11.67	0.57	0.147	(0.189)	0.038	0.109
141	11.75	0.57	0.147	(0.188)	0.038	0.109
142	11.83	0.60	0.156	(0.187)	0.040	0.115
143	11.92	0.60	0.156	(0.186)	0.040	0.115
144	12.00	0.60	0.156	(0.185)	0.040	0.115
145	12.08	0.83	0.216	(0.185)	0.056	0.160
146	12.17	0.83	0.216	(0.184)	0.056	0.160
147	12.25	0.83	0.216	(0.183)	0.056	0.160
148	12.33	0.87	0.225	(0.182)	0.058	0.166
149	12.42	0.87	0.225	(0.181)	0.058	0.166
150	12.50	0.87	0.225	(0.180)	0.058	0.166
151	12.58	0.93	0.242	(0.179)	0.063	0.179
152	12.67	0.93	0.242	(0.178)	0.063	0.179

153	12.75	0.93	0.242	(0.177)	0.063	0.179
154	12.83	0.97	0.251	(0.176)	0.065	0.186
155	12.92	0.97	0.251	(0.175)	0.065	0.186
156	13.00	0.97	0.251	(0.175)	0.065	0.186
157	13.08	1.13	0.294	(0.174)	0.076	0.218
158	13.17	1.13	0.294	(0.173)	0.076	0.218
159	13.25	1.13	0.294	(0.172)	0.076	0.218
160	13.33	1.13	0.294	(0.171)	0.076	0.218
161	13.42	1.13	0.294	(0.170)	0.076	0.218
162	13.50	1.13	0.294	(0.169)	0.076	0.218
163	13.58	0.77	0.199	(0.168)	0.052	0.147
164	13.67	0.77	0.199	(0.168)	0.052	0.147
165	13.75	0.77	0.199	(0.167)	0.052	0.147
166	13.83	0.77	0.199	(0.166)	0.052	0.147
167	13.92	0.77	0.199	(0.165)	0.052	0.147
168	14.00	0.77	0.199	(0.164)	0.052	0.147
169	14.08	0.90	0.234	(0.163)	0.061	0.173
170	14.17	0.90	0.234	(0.163)	0.061	0.173
171	14.25	0.90	0.234	(0.162)	0.061	0.173
172	14.33	0.87	0.225	(0.161)	0.058	0.166
173	14.42	0.87	0.225	(0.160)	0.058	0.166
174	14.50	0.87	0.225	(0.159)	0.058	0.166
175	14.58	0.87	0.225	(0.158)	0.058	0.166
176	14.67	0.87	0.225	(0.158)	0.058	0.166
177	14.75	0.87	0.225	(0.157)	0.058	0.166
178	14.83	0.83	0.216	(0.156)	0.056	0.160
179	14.92	0.83	0.216	(0.155)	0.056	0.160
180	15.00	0.83	0.216	(0.154)	0.056	0.160
181	15.08	0.80	0.208	(0.154)	0.054	0.154
182	15.17	0.80	0.208	(0.153)	0.054	0.154
183	15.25	0.80	0.208	(0.152)	0.054	0.154
184	15.33	0.77	0.199	(0.151)	0.052	0.147
185	15.42	0.77	0.199	(0.150)	0.052	0.147
186	15.50	0.77	0.199	(0.150)	0.052	0.147
187	15.58	0.63	0.164	(0.149)	0.043	0.122
188	15.67	0.63	0.164	(0.148)	0.043	0.122
189	15.75	0.63	0.164	(0.147)	0.043	0.122
190	15.83	0.63	0.164	(0.147)	0.043	0.122
191	15.92	0.63	0.164	(0.146)	0.043	0.122
192	16.00	0.63	0.164	(0.145)	0.043	0.122
193	16.08	0.13	0.035	(0.144)	0.009	0.026
194	16.17	0.13	0.035	(0.144)	0.009	0.026
195	16.25	0.13	0.035	(0.143)	0.009	0.026
196	16.33	0.13	0.035	(0.142)	0.009	0.026
197	16.42	0.13	0.035	(0.141)	0.009	0.026
198	16.50	0.13	0.035	(0.141)	0.009	0.026
199	16.58	0.10	0.026	(0.140)	0.007	0.019
200	16.67	0.10	0.026	(0.139)	0.007	0.019
201	16.75	0.10	0.026	(0.139)	0.007	0.019
202	16.83	0.10	0.026	(0.138)	0.007	0.019
203	16.92	0.10	0.026	(0.137)	0.007	0.019
204	17.00	0.10	0.026	(0.137)	0.007	0.019
205	17.08	0.17	0.043	(0.136)	0.011	0.032
206	17.17	0.17	0.043	(0.135)	0.011	0.032
207	17.25	0.17	0.043	(0.134)	0.011	0.032
208	17.33	0.17	0.043	(0.134)	0.011	0.032
209	17.42	0.17	0.043	(0.133)	0.011	0.032
210	17.50	0.17	0.043	(0.132)	0.011	0.032
211	17.58	0.17	0.043	(0.132)	0.011	0.032
212	17.67	0.17	0.043	(0.131)	0.011	0.032
213	17.75	0.17	0.043	(0.131)	0.011	0.032
214	17.83	0.13	0.035	(0.130)	0.009	0.026
215	17.92	0.13	0.035	(0.129)	0.009	0.026
216	18.00	0.13	0.035	(0.129)	0.009	0.026
217	18.08	0.13	0.035	(0.128)	0.009	0.026
218	18.17	0.13	0.035	(0.127)	0.009	0.026
219	18.25	0.13	0.035	(0.127)	0.009	0.026
220	18.33	0.13	0.035	(0.126)	0.009	0.026
221	18.42	0.13	0.035	(0.125)	0.009	0.026
222	18.50	0.13	0.035	(0.125)	0.009	0.026
223	18.58	0.10	0.026	(0.124)	0.007	0.019
224	18.67	0.10	0.026	(0.124)	0.007	0.019
225	18.75	0.10	0.026	(0.123)	0.007	0.019
226	18.83	0.07	0.017	(0.122)	0.004	0.013
227	18.92	0.07	0.017	(0.122)	0.004	0.013
228	19.00	0.07	0.017	(0.121)	0.004	0.013
229	19.08	0.10	0.026	(0.121)	0.007	0.019
230	19.17	0.10	0.026	(0.120)	0.007	0.019
231	19.25	0.10	0.026	(0.120)	0.007	0.019
232	19.33	0.13	0.035	(0.119)	0.009	0.026
233	19.42	0.13	0.035	(0.118)	0.009	0.026
234	19.50	0.13	0.035	(0.118)	0.009	0.026
235	19.58	0.10	0.026	(0.117)	0.007	0.019
236	19.67	0.10	0.026	(0.117)	0.007	0.019

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237  19.75     0.10      0.026       (  0.116)       0.007        0.019
238  19.83     0.07      0.017       (  0.116)       0.004        0.013
239  19.92     0.07      0.017       (  0.115)       0.004        0.013
240  20.00     0.07      0.017       (  0.115)       0.004        0.013
241  20.08     0.10      0.026       (  0.114)       0.007        0.019
242  20.17     0.10      0.026       (  0.114)       0.007        0.019
243  20.25     0.10      0.026       (  0.113)       0.007        0.019
244  20.33     0.10      0.026       (  0.113)       0.007        0.019
245  20.42     0.10      0.026       (  0.112)       0.007        0.019
246  20.50     0.10      0.026       (  0.112)       0.007        0.019
247  20.58     0.10      0.026       (  0.111)       0.007        0.019
248  20.67     0.10      0.026       (  0.111)       0.007        0.019
249  20.75     0.10      0.026       (  0.110)       0.007        0.019
250  20.83     0.07      0.017       (  0.110)       0.004        0.013
251  20.92     0.07      0.017       (  0.110)       0.004        0.013
252  21.00     0.07      0.017       (  0.109)       0.004        0.013
253  21.08     0.10      0.026       (  0.109)       0.007        0.019
254  21.17     0.10      0.026       (  0.108)       0.007        0.019
255  21.25     0.10      0.026       (  0.108)       0.007        0.019
256  21.33     0.07      0.017       (  0.107)       0.004        0.013
257  21.42     0.07      0.017       (  0.107)       0.004        0.013
258  21.50     0.07      0.017       (  0.107)       0.004        0.013
259  21.58     0.10      0.026       (  0.106)       0.007        0.019
260  21.67     0.10      0.026       (  0.106)       0.007        0.019
261  21.75     0.10      0.026       (  0.105)       0.007        0.019
262  21.83     0.07      0.017       (  0.105)       0.004        0.013
263  21.92     0.07      0.017       (  0.105)       0.004        0.013
264  22.00     0.07      0.017       (  0.104)       0.004        0.013
265  22.08     0.10      0.026       (  0.104)       0.007        0.019
266  22.17     0.10      0.026       (  0.104)       0.007        0.019
267  22.25     0.10      0.026       (  0.103)       0.007        0.019
268  22.33     0.07      0.017       (  0.103)       0.004        0.013
269  22.42     0.07      0.017       (  0.103)       0.004        0.013
270  22.50     0.07      0.017       (  0.102)       0.004        0.013
271  22.58     0.07      0.017       (  0.102)       0.004        0.013
272  22.67     0.07      0.017       (  0.102)       0.004        0.013
273  22.75     0.07      0.017       (  0.102)       0.004        0.013
274  22.83     0.07      0.017       (  0.101)       0.004        0.013
275  22.92     0.07      0.017       (  0.101)       0.004        0.013
276  23.00     0.07      0.017       (  0.101)       0.004        0.013
277  23.08     0.07      0.017       (  0.101)       0.004        0.013
278  23.17     0.07      0.017       (  0.100)       0.004        0.013
279  23.25     0.07      0.017       (  0.100)       0.004        0.013
280  23.33     0.07      0.017       (  0.100)       0.004        0.013
281  23.42     0.07      0.017       (  0.100)       0.004        0.013
282  23.50     0.07      0.017       (  0.100)       0.004        0.013
283  23.58     0.07      0.017       (  0.099)       0.004        0.013
284  23.67     0.07      0.017       (  0.099)       0.004        0.013
285  23.75     0.07      0.017       (  0.099)       0.004        0.013
286  23.83     0.07      0.017       (  0.099)       0.004        0.013
287  23.92     0.07      0.017       (  0.099)       0.004        0.013
288  24.00     0.07      0.017       (  0.099)       0.004        0.013
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    19.2
      Flood volume = Effective rainfall      1.60(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       1.1(Ac.Ft)
      Total soil loss =      0.56(In)
      Total soil loss =     0.376(Ac.Ft)
      Total rainfall =      2.16(In)
      Flood volume =       46637.0 Cubic Feet
      Total soil loss =       16386.0 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      1.762(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        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0003      0.05  Q         |         |         |         |
   0+10       0.0010      0.09  Q         |         |         |         |
   0+15       0.0017      0.10  Q         |         |         |         |
   0+20       0.0026      0.13  Q         |         |         |         |
   0+25       0.0036      0.15  Q         |         |         |         |
   0+30       0.0047      0.15  Q         |         |         |         |
   0+35       0.0057      0.16  Q         |         |         |         |
   0+40       0.0068      0.16  Q         |         |         |         |
   0+45       0.0079      0.16  Q         |         |         |         |
   0+50       0.0091      0.18  Q         |         |         |         |
   0+55       0.0105      0.20  Q         |         |         |         |
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1+ 0       0.0119      0.21  Q          |          |          |          |
1+ 5       0.0132      0.18  Q          |          |          |          |
1+10       0.0143      0.16  Q          |          |          |          |
1+15       0.0154      0.16  Q          |          |          |          |
1+20       0.0164      0.16  Q          |          |          |          |
1+25       0.0175      0.16  Q          |          |          |          |
1+30       0.0186      0.16  Q          |          |          |          |
1+35       0.0197      0.16  Q          |          |          |          |
1+40       0.0207      0.16  Q          |          |          |          |
1+45       0.0218      0.16  Q          |          |          |          |
1+50       0.0230      0.18  Q          |          |          |          |
1+55       0.0244      0.20  Q          |          |          |          |
2+ 0       0.0259      0.21  Q          |          |          |          |
2+ 5       0.0273      0.21  QV         |          |          |          |
2+10       0.0287      0.21  QV         |          |          |          |
2+15       0.0301      0.21  QV         |          |          |          |
2+20       0.0316      0.21  QV         |          |          |          |
2+25       0.0330      0.21  QV         |          |          |          |
2+30       0.0344      0.21  QV         |          |          |          |
2+35       0.0360      0.23  QV         |          |          |          |
2+40       0.0378      0.25  |Q         |          |          |          |
2+45       0.0395      0.26  |Q         |          |          |          |
2+50       0.0413      0.26  |Q         |          |          |          |
2+55       0.0431      0.26  |Q         |          |          |          |
3+ 0       0.0449      0.26  |Q         |          |          |          |
3+ 5       0.0467      0.26  |Q         |          |          |          |
3+10       0.0485      0.26  |Q         |          |          |          |
3+15       0.0503      0.26  |Q         |          |          |          |
3+20       0.0520      0.26  |Q         |          |          |          |
3+25       0.0538      0.26  |QV        |          |          |          |
3+30       0.0556      0.26  |QV        |          |          |          |
3+35       0.0574      0.26  |QV        |          |          |          |
3+40       0.0592      0.26  |QV        |          |          |          |
3+45       0.0610      0.26  |QV        |          |          |          |
3+50       0.0629      0.28  |QV        |          |          |          |
3+55       0.0650      0.31  |QV        |          |          |          |
4+ 0       0.0672      0.31  |QV        |          |          |          |
4+ 5       0.0693      0.31  |QV        |          |          |          |
4+10       0.0714      0.31  |QV        |          |          |          |
4+15       0.0736      0.31  |QV        |          |          |          |
4+20       0.0759      0.34  |QV        |          |          |          |
4+25       0.0784      0.36  |QV        |          |          |          |
4+30       0.0808      0.36  |Q V       |          |          |          |
4+35       0.0833      0.36  |Q V       |          |          |          |
4+40       0.0858      0.36  |Q V       |          |          |          |
4+45       0.0883      0.36  |Q V       |          |          |          |
4+50       0.0910      0.39  |Q V       |          |          |          |
4+55       0.0938      0.41  |Q V       |          |          |          |
5+ 0       0.0967      0.41  |Q V       |          |          |          |
5+ 5       0.0992      0.36  |Q V       |          |          |          |
5+10       0.1014      0.32  |Q V       |          |          |          |
5+15       0.1036      0.31  |Q V       |          |          |          |
5+20       0.1059      0.34  |Q V       |          |          |          |
5+25       0.1083      0.36  |Q  V      |          |          |          |
5+30       0.1108      0.36  |Q  V      |          |          |          |
5+35       0.1135      0.39  |Q  V      |          |          |          |
5+40       0.1163      0.41  |Q  V      |          |          |          |
5+45       0.1192      0.41  |Q  V      |          |          |          |
5+50       0.1220      0.41  |Q  V      |          |          |          |
5+55       0.1249      0.41  |Q  V      |          |          |          |
6+ 0       0.1277      0.41  |Q  V      |          |          |          |
6+ 5       0.1308      0.44  |Q  V      |          |          |          |
6+10       0.1339      0.46  |Q   V     |          |          |          |
6+15       0.1371      0.47  |Q   V     |          |          |          |
6+20       0.1403      0.47  |Q   V     |          |          |          |
6+25       0.1436      0.47  |Q   V     |          |          |          |
6+30       0.1468      0.47  |Q   V     |          |          |          |
6+35       0.1502      0.49  |Q   V     |          |          |          |
6+40       0.1537      0.51  | Q  V     |          |          |          |
6+45       0.1572      0.52  | Q  V     |          |          |          |
6+50       0.1608      0.52  | Q   V    |          |          |          |
6+55       0.1644      0.52  | Q   V    |          |          |          |
7+ 0       0.1680      0.52  | Q   V    |          |          |          |
7+ 5       0.1715      0.52  | Q   V    |          |          |          |
7+10       0.1751      0.52  | Q   V    |          |          |          |
7+15       0.1787      0.52  | Q   V    |          |          |          |
7+20       0.1824      0.54  | Q   V    |          |          |          |
7+25       0.1863      0.56  | Q   V    |          |          |          |
7+30       0.1902      0.57  | Q    V   |          |          |          |
7+35       0.1943      0.60  | Q    V   |          |          |          |
7+40       0.1986      0.62  | Q    V   |          |          |          |
7+45       0.2028      0.62  | Q    V   |          |          |          |
7+50       0.2073      0.65  | Q    V   |          |          |          |
7+55       0.2119      0.67  | Q    V   |          |          |          |
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8+ 0	0.2165	0.67	Q V
8+ 5	0.2215	0.72	Q V
8+10	0.2268	0.77	Q V
8+15	0.2321	0.77	Q V
8+20	0.2375	0.78	Q V
8+25	0.2428	0.78	Q V
8+30	0.2482	0.78	Q V
8+35	0.2537	0.80	Q V
8+40	0.2594	0.82	Q V
8+45	0.2651	0.83	Q V
8+50	0.2710	0.85	Q V
8+55	0.2770	0.88	Q V
9+ 0	0.2831	0.88	Q V
9+ 5	0.2895	0.93	Q V
9+10	0.2962	0.97	Q V
9+15	0.3029	0.98	Q V
9+20	0.3099	1.01	Q V
9+25	0.3170	1.03	Q V
9+30	0.3241	1.04	Q V
9+35	0.3314	1.06	Q V
9+40	0.3389	1.08	Q V
9+45	0.3464	1.09	Q V
9+50	0.3541	1.11	Q V
9+55	0.3619	1.13	Q V
10+ 0	0.3697	1.14	Q V
10+ 5	0.3763	0.96	Q V
10+10	0.3819	0.81	Q V
10+15	0.3874	0.79	Q V
10+20	0.3927	0.78	Q V
10+25	0.3981	0.78	Q V
10+30	0.4034	0.78	Q V
10+35	0.4097	0.90	Q V
10+40	0.4166	1.01	Q V
10+45	0.4237	1.03	Q V
10+50	0.4308	1.04	Q V
10+55	0.4380	1.04	Q V
11+ 0	0.4451	1.04	Q V
11+ 5	0.4521	1.01	Q V
11+10	0.4589	0.99	Q V
11+15	0.4657	0.99	Q V
11+20	0.4725	0.98	Q V
11+25	0.4792	0.98	Q V
11+30	0.4860	0.98	Q V
11+35	0.4925	0.93	Q V
11+40	0.4986	0.89	Q V
11+45	0.5047	0.88	Q V
11+50	0.5109	0.91	Q V
11+55	0.5173	0.93	Q V
12+ 0	0.5237	0.93	Q V
12+ 5	0.5314	1.11	Q V
12+10	0.5400	1.26	Q V
12+15	0.5489	1.29	Q V
12+20	0.5580	1.32	Q V
12+25	0.5672	1.34	Q V
12+30	0.5765	1.35	Q V
12+35	0.5861	1.40	Q V
12+40	0.5961	1.44	Q V
12+45	0.6060	1.45	Q V
12+50	0.6162	1.48	Q V
12+55	0.6265	1.50	Q V
13+ 0	0.6368	1.50	Q V
13+ 5	0.6481	1.63	Q V
13+10	0.6600	1.74	Q V
13+15	0.6721	1.76	Q V
13+20	0.6842	1.76	Q V
13+25	0.6964	1.76	Q V
13+30	0.7085	1.76	Q V
13+35	0.7187	1.48	Q V
13+40	0.7273	1.25	Q V
13+45	0.7356	1.21	Q V
13+50	0.7439	1.19	Q V
13+55	0.7521	1.19	Q V
14+ 0	0.7603	1.19	Q V
14+ 5	0.7692	1.29	Q V
14+10	0.7787	1.38	Q V
14+15	0.7883	1.39	Q V
14+20	0.7977	1.37	Q V
14+25	0.8070	1.35	Q V
14+30	0.8163	1.35	Q V
14+35	0.8256	1.35	Q V
14+40	0.8349	1.35	Q V
14+45	0.8442	1.35	Q V
14+50	0.8533	1.32	Q V
14+55	0.8622	1.30	Q V

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15+ 0       0.8712      1.30  |     Q     |           |           | V         |
15+ 5       0.8799      1.27  |     Q     |           |           | V         |
15+10       0.8885      1.25  |    Q      |           |           |  V        |
15+15       0.8971      1.25  |    Q      |           |           |  V        |
15+20       0.9055      1.22  |    Q      |           |           |  V        |
15+25       0.9137      1.20  |    Q      |           |           |   V       |
15+30       0.9219      1.19  |    Q      |           |           |   V       |
15+35       0.9294      1.09  |    Q      |           |           |   V       |
15+40       0.9364      1.01  |    Q      |           |           |   V       |
15+45       0.9432      0.99  |   Q       |           |           |    V      |
15+50       0.9500      0.98  |   Q       |           |           |    V      |
15+55       0.9567      0.98  |   Q       |           |           |    V      |
16+ 0       0.9635      0.98  |   Q       |           |           |    V      |
16+ 5       0.9677      0.60  |  Q        |           |           |     V     |
16+10       0.9697      0.29  |Q          |           |           |     V     |
16+15       0.9712      0.23  Q           |           |           |     V     |
16+20       0.9727      0.21  Q           |           |           |     V     |
16+25       0.9741      0.21  Q           |           |           |     V     |
16+30       0.9755      0.21  Q           |           |           |     V     |
16+35       0.9768      0.18  Q           |           |           |     V     |
16+40       0.9779      0.16  Q           |           |           |     V     |
16+45       0.9790      0.16  Q           |           |           |     V     |
16+50       0.9800      0.16  Q           |           |           |     V     |
16+55       0.9811      0.16  Q           |           |           |     V     |
17+ 0       0.9822      0.16  Q           |           |           |     V     |
17+ 5       0.9836      0.21  Q           |           |           |     V     |
17+10       0.9853      0.25  Q           |           |           |     V     |
17+15       0.9871      0.26  |Q          |           |           |     V     |
17+20       0.9888      0.26  |Q          |           |           |     V     |
17+25       0.9906      0.26  |Q          |           |           |      V    |
17+30       0.9924      0.26  |Q          |           |           |      V    |
17+35       0.9942      0.26  |Q          |           |           |      V    |
17+40       0.9960      0.26  |Q          |           |           |      V    |
17+45       0.9978      0.26  |Q          |           |           |      V    |
17+50       0.9994      0.23  Q           |           |           |      V    |
17+55       1.0008      0.21  Q           |           |           |      V    |
18+ 0       1.0023      0.21  Q           |           |           |      V    |
18+ 5       1.0037      0.21  Q           |           |           |      V    |
18+10       1.0051      0.21  Q           |           |           |      V    |
18+15       1.0066      0.21  Q           |           |           |      V    |
18+20       1.0080      0.21  Q           |           |           |      V    |
18+25       1.0094      0.21  Q           |           |           |      V    |
18+30       1.0108      0.21  Q           |           |           |      V    |
18+35       1.0121      0.18  Q           |           |           |      V    |
18+40       1.0132      0.16  Q           |           |           |      V    |
18+45       1.0143      0.16  Q           |           |           |      V    |
18+50       1.0152      0.13  Q           |           |           |      V    |
18+55       1.0159      0.11  Q           |           |           |      V    |
19+ 0       1.0167      0.10  Q           |           |           |      V    |
19+ 5       1.0175      0.13  Q           |           |           |       V   |
19+10       1.0186      0.15  Q           |           |           |       V   |
19+15       1.0196      0.15  Q           |           |           |       V   |
19+20       1.0209      0.18  Q           |           |           |       V   |
19+25       1.0223      0.20  Q           |           |           |       V   |
19+30       1.0237      0.21  Q           |           |           |       V   |
19+35       1.0249      0.18  Q           |           |           |       V   |
19+40       1.0260      0.16  Q           |           |           |       V   |
19+45       1.0271      0.16  Q           |           |           |       V   |
19+50       1.0280      0.13  Q           |           |           |       V   |
19+55       1.0288      0.11  Q           |           |           |       V   |
20+ 0       1.0295      0.10  Q           |           |           |       V   |
20+ 5       1.0304      0.13  Q           |           |           |       V   |
20+10       1.0314      0.15  Q           |           |           |       V   |
20+15       1.0325      0.15  Q           |           |           |       V   |
20+20       1.0336      0.16  Q           |           |           |       V   |
20+25       1.0346      0.16  Q           |           |           |       V   |
20+30       1.0357      0.16  Q           |           |           |       V   |
20+35       1.0368      0.16  Q           |           |           |       V   |
20+40       1.0378      0.16  Q           |           |           |       V   |
20+45       1.0389      0.16  Q           |           |           |       V   |
20+50       1.0398      0.13  Q           |           |           |       V   |
20+55       1.0406      0.11  Q           |           |           |       V   |
21+ 0       1.0413      0.10  Q           |           |           |       V   |
21+ 5       1.0422      0.13  Q           |           |           |       V   |
21+10       1.0432      0.15  Q           |           |           |       V   |
21+15       1.0443      0.15  Q           |           |           |        V  |
21+20       1.0452      0.13  Q           |           |           |        V  |
21+25       1.0459      0.11  Q           |           |           |        V  |
21+30       1.0466      0.10  Q           |           |           |        V  |
21+35       1.0475      0.13  Q           |           |           |        V  |
21+40       1.0486      0.15  Q           |           |           |        V  |
21+45       1.0496      0.15  Q           |           |           |        V  |
21+50       1.0505      0.13  Q           |           |           |        V  |
21+55       1.0513      0.11  Q           |           |           |        V  |
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  22+ 0       1.0520      0.10  Q          |          |          |         v|
  22+ 5       1.0529      0.13  Q          |          |          |         v|
  22+10       1.0539      0.15  Q          |          |          |         v|
  22+15       1.0550      0.15  Q          |          |          |         v|
  22+20       1.0559      0.13  Q          |          |          |         v|
  22+25       1.0566      0.11  Q          |          |          |         v|
  22+30       1.0573      0.10  Q          |          |          |         v|
  22+35       1.0580      0.10  Q          |          |          |         v|
  22+40       1.0588      0.10  Q          |          |          |         v|
  22+45       1.0595      0.10  Q          |          |          |         v|
  22+50       1.0602      0.10  Q          |          |          |         v|
  22+55       1.0609      0.10  Q          |          |          |         v|
  23+ 0       1.0616      0.10  Q          |          |          |         v|
  23+ 5       1.0623      0.10  Q          |          |          |         v|
  23+10       1.0630      0.10  Q          |          |          |         v|
  23+15       1.0638      0.10  Q          |          |          |         v|
  23+20       1.0645      0.10  Q          |          |          |         v|
  23+25       1.0652      0.10  Q          |          |          |         v|
  23+30       1.0659      0.10  Q          |          |          |         v|
  23+35       1.0666      0.10  Q          |          |          |         v|
  23+40       1.0673      0.10  Q          |          |          |         v|
  23+45       1.0680      0.10  Q          |          |          |         v|
  23+50       1.0688      0.10  Q          |          |          |         v|
  23+55       1.0695      0.10  Q          |          |          |         v|
  24+ 0       1.0702      0.10  Q          |          |          |         v|
  24+ 5       1.0705      0.05  Q          |          |          |         v|
  24+10       1.0706      0.01  Q          |          |          |         v|
  24+15       1.0706      0.00  Q          |          |          |          v
-------------------------------------------------------------------------------
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U n i t H y d r o g r a p h A n a l y s i s

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Study date 06/06/22 File: PRO10110.out

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

Program License Serial Number 5006

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

English Units used in output format

Drainage Area = 8.03(Ac.) = 0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 8.03(Ac.) = 0.013 Sq. Mi.
Length along longest watercourse = 987.00(Ft.)
Length along longest watercourse measured to centroid = 494.00(Ft.)
Length along longest watercourse = 0.187 Mi.
Length along longest watercourse measured to centroid = 0.094 Mi.
Difference in elevation = 11.42(Ft.)
Slope along watercourse = 61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.035 Hr.
Lag time = 2.13 Min.
25% of lag time = 0.53 Min.
40% of lag time = 0.85 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]
8.03	0.50	4.01

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
8.03	1.30	10.44

STORM EVENT (YEAR) = 10.00
Area Averaged 2-Year Rainfall = 0.500(In)
Area Averaged 100-Year Rainfall = 1.300(In)

Point rain (area averaged) = 0.829(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 0.829(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
8.030	56.00	0.800

Total Area Entered = 8.03(Ac.)

RI AMC2	RI AMC-2	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
56.0	56.0	0.511	0.800	0.143	1.000	0.143
					Sum (F) =	0.143

Area averaged mean soil loss (F) (In/Hr) = 0.143
Minimum soil loss rate ((In/Hr)) = 0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

Slope of intensity-duration curve for a 1 hour storm =0.5000

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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	4.20	0.418	(0.143)	0.109	0.309
2	0.17	4.30	0.428	(0.143)	0.111	0.317
3	0.25	5.00	0.497	(0.143)	0.129	0.368
4	0.33	5.00	0.497	(0.143)	0.129	0.368
5	0.42	5.80	0.577	0.143	(0.150)	0.434
6	0.50	6.50	0.647	0.143	(0.168)	0.504
7	0.58	7.40	0.736	0.143	(0.191)	0.593
8	0.67	8.60	0.856	0.143	(0.222)	0.713
9	0.75	12.30	1.224	0.143	(0.318)	1.081
10	0.83	29.10	2.895	0.143	(0.753)	2.752
11	0.92	6.80	0.677	0.143	(0.176)	0.533
12	1.00	5.00	0.497	(0.143)	0.129	0.368
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	8.3

Flood volume = Effective rainfall 0.69(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.5(Ac.Ft)
Total soil loss = 0.13(In)
Total soil loss = 0.090(Ac.Ft)
Total rainfall = 0.83(In)
Flood volume = 20257.9 Cubic Feet
Total soil loss = 3908.5 Cubic Feet

Peak flow rate of this hydrograph = 15.042(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	5.0	10.0	15.0	20.0
0+ 5	0.0084	1.22	V Q	|	|	|	|
0+10	0.0241	2.28	| V Q	|	|	|	|
0+15	0.0427	2.70	| V Q	|	|	|	|
0+20	0.0629	2.94	| Q	|	|	|	|
0+25	0.0852	3.23	| QV	|	|	|	|
0+30	0.1109	3.74	| Q V|	|	|	|	|
0+35	0.1409	4.36	| Q | V	|	|	|	|
0+40	0.1767	5.19	| Q V	|	|	|	|
0+45	0.2256	7.11	| | Q V|	|	|	|	|
0+50	0.3292	15.04	| | |	|	| V Q	|	|
0+55	0.4122	12.05	| | | Q	| V	|	|
1+ 0	0.4476	5.13	| Q |	|	|	| V |	|
1+ 5	0.4622	2.13	| Q |	|	|	|	V|
1+10	0.4645	0.34	Q |	|	|	|	V|
1+15	0.4651	0.08	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.211(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.211(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	0.189	(0.143)	0.049	0.140
2	0.17	1.30	0.189	(0.143)	0.049	0.140
3	0.25	1.10	0.160	(0.143)	0.042	0.118
4	0.33	1.50	0.218	(0.143)	0.057	0.161
5	0.42	1.50	0.218	(0.143)	0.057	0.161
6	0.50	1.80	0.262	(0.143)	0.068	0.194
7	0.58	1.50	0.218	(0.143)	0.057	0.161
8	0.67	1.80	0.262	(0.143)	0.068	0.194
9	0.75	1.80	0.262	(0.143)	0.068	0.194
10	0.83	1.50	0.218	(0.143)	0.057	0.161
11	0.92	1.60	0.233	(0.143)	0.060	0.172
12	1.00	1.80	0.262	(0.143)	0.068	0.194
13	1.08	2.20	0.320	(0.143)	0.083	0.237
14	1.17	2.20	0.320	(0.143)	0.083	0.237
15	1.25	2.20	0.320	(0.143)	0.083	0.237
16	1.33	2.00	0.291	(0.143)	0.076	0.215
17	1.42	2.60	0.378	(0.143)	0.098	0.280
18	1.50	2.70	0.392	(0.143)	0.102	0.290
19	1.58	2.40	0.349	(0.143)	0.091	0.258
20	1.67	2.70	0.392	(0.143)	0.102	0.290
21	1.75	3.30	0.480	(0.143)	0.125	0.355
22	1.83	3.10	0.451	(0.143)	0.117	0.333
23	1.92	2.90	0.422	(0.143)	0.110	0.312
24	2.00	3.00	0.436	(0.143)	0.113	0.323
25	2.08	3.10	0.451	(0.143)	0.117	0.333
26	2.17	4.20	0.611	0.143	(0.159)	0.468
27	2.25	5.00	0.727	0.143	(0.189)	0.584
28	2.33	3.50	0.509	(0.143)	0.132	0.376
29	2.42	6.80	0.988	0.143	(0.257)	0.845
30	2.50	7.30	1.061	0.143	(0.276)	0.918
31	2.58	8.20	1.192	0.143	(0.310)	1.049
32	2.67	5.90	0.858	0.143	(0.223)	0.715
33	2.75	2.00	0.291	(0.143)	0.076	0.215
34	2.83	1.80	0.262	(0.143)	0.068	0.194
35	2.92	1.80	0.262	(0.143)	0.068	0.194
36	3.00	0.60	0.087	(0.143)	0.023	0.065
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	11.3

Flood volume = Effective rainfall 0.94(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.6(Ac.Ft)
Total soil loss = 0.27(In)
Total soil loss = 0.180(Ac.Ft)
Total rainfall = 1.21(In)
Flood volume = 27478.4 Cubic Feet
Total soil loss = 7831.5 Cubic Feet

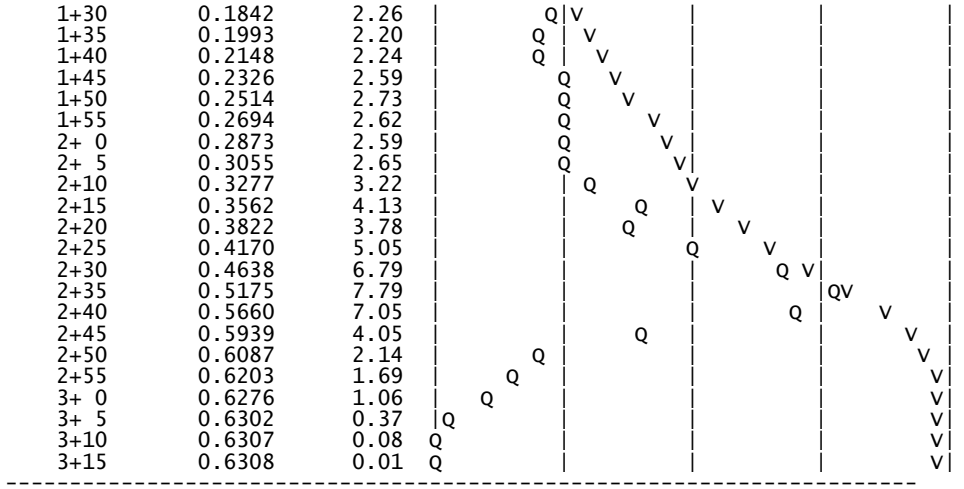
Peak flow rate of this hydrograph = 7.794(CFS)

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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	2.5	5.0	7.5	10.0
0+ 5	0.0038	0.55	V Q	|	|	|	|
0+10	0.0108	1.02	V Q	|	|	|	|
0+15	0.0178	1.02	|V Q	|	|	|	|
0+20	0.0257	1.15	|V Q	|	|	|	|
0+25	0.0345	1.28	| V Q	|	|	|	|
0+30	0.0443	1.43	| V Q	|	|	|	|
0+35	0.0541	1.41	| V Q	|	|	|	|
0+40	0.0641	1.45	| VQ	|	|	|	|
0+45	0.0747	1.55	| V Q	|	|	|	|
0+50	0.0846	1.43	| Q	|	|	|	|
0+55	0.0941	1.38	| Q	|	|	|	|
1+ 0	0.1043	1.48	| QV	|	|	|	|
1+ 5	0.1161	1.72	| QV	|	|	|	|
1+10	0.1290	1.88	| QV	|	|	|	|
1+15	0.1421	1.91	| Q V|	|	|	|	|
1+20	0.1548	1.83	| Q V|	|	|	|	|
1+25	0.1686	2.02	| Q V	|	|	|	|


1+30 0.1842 2.26
1+35 0.1993 2.20
1+40 0.2148 2.24
1+45 0.2326 2.59
1+50 0.2514 2.73
1+55 0.2694 2.62
2+ 0 0.2873 2.59
2+ 5 0.3055 2.65
2+10 0.3277 3.22
2+15 0.3562 4.13
2+20 0.3822 3.78
2+25 0.4170 5.05
2+30 0.4638 6.79
2+35 0.5175 7.79
2+40 0.5660 7.05
2+45 0.5939 4.05
2+50 0.6087 2.14
2+55 0.6203 1.69
3+ 0 0.6276 1.06
3+ 5 0.6302 0.37
3+10 0.6307 0.08
3+15 0.6308 0.01

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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  06/06/22 File: PRO10610.out

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    1.617(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.617(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.097	(0.143)	0.025	0.072
2	0.17	0.60	0.116	(0.143)	0.030	0.086
3	0.25	0.60	0.116	(0.143)	0.030	0.086
4	0.33	0.60	0.116	(0.143)	0.030	0.086
5	0.42	0.60	0.116	(0.143)	0.030	0.086
6	0.50	0.70	0.136	(0.143)	0.035	0.101
7	0.58	0.70	0.136	(0.143)	0.035	0.101
8	0.67	0.70	0.136	(0.143)	0.035	0.101
9	0.75	0.70	0.136	(0.143)	0.035	0.101
10	0.83	0.70	0.136	(0.143)	0.035	0.101
11	0.92	0.70	0.136	(0.143)	0.035	0.101
12	1.00	0.80	0.155	(0.143)	0.040	0.115
13	1.08	0.80	0.155	(0.143)	0.040	0.115
14	1.17	0.80	0.155	(0.143)	0.040	0.115
15	1.25	0.80	0.155	(0.143)	0.040	0.115
16	1.33	0.80	0.155	(0.143)	0.040	0.115
17	1.42	0.80	0.155	(0.143)	0.040	0.115
18	1.50	0.80	0.155	(0.143)	0.040	0.115
19	1.58	0.80	0.155	(0.143)	0.040	0.115
20	1.67	0.80	0.155	(0.143)	0.040	0.115
21	1.75	0.80	0.155	(0.143)	0.040	0.115
22	1.83	0.80	0.155	(0.143)	0.040	0.115
23	1.92	0.80	0.155	(0.143)	0.040	0.115
24	2.00	0.90	0.175	(0.143)	0.045	0.129
25	2.08	0.80	0.155	(0.143)	0.040	0.115
26	2.17	0.90	0.175	(0.143)	0.045	0.129
27	2.25	0.90	0.175	(0.143)	0.045	0.129
28	2.33	0.90	0.175	(0.143)	0.045	0.129
29	2.42	0.90	0.175	(0.143)	0.045	0.129
30	2.50	0.90	0.175	(0.143)	0.045	0.129
31	2.58	0.90	0.175	(0.143)	0.045	0.129
32	2.67	0.90	0.175	(0.143)	0.045	0.129
33	2.75	1.00	0.194	(0.143)	0.050	0.144
34	2.83	1.00	0.194	(0.143)	0.050	0.144
35	2.92	1.00	0.194	(0.143)	0.050	0.144
36	3.00	1.00	0.194	(0.143)	0.050	0.144
37	3.08	1.00	0.194	(0.143)	0.050	0.144
38	3.17	1.10	0.213	(0.143)	0.055	0.158
39	3.25	1.10	0.213	(0.143)	0.055	0.158
40	3.33	1.10	0.213	(0.143)	0.055	0.158
41	3.42	1.20	0.233	(0.143)	0.061	0.172
42	3.50	1.30	0.252	(0.143)	0.066	0.187
43	3.58	1.40	0.272	(0.143)	0.071	0.201
44	3.67	1.40	0.272	(0.143)	0.071	0.201
45	3.75	1.50	0.291	(0.143)	0.076	0.215
46	3.83	1.50	0.291	(0.143)	0.076	0.215
47	3.92	1.60	0.310	(0.143)	0.081	0.230
48	4.00	1.60	0.310	(0.143)	0.081	0.230
49	4.08	1.70	0.330	(0.143)	0.086	0.244
50	4.17	1.80	0.349	(0.143)	0.091	0.258
51	4.25	1.90	0.369	(0.143)	0.096	0.273
52	4.33	2.00	0.388	(0.143)	0.101	0.287
53	4.42	2.10	0.408	(0.143)	0.106	0.302
54	4.50	2.10	0.408	(0.143)	0.106	0.302
55	4.58	2.20	0.427	(0.143)	0.111	0.316
56	4.67	2.30	0.446	(0.143)	0.116	0.330
57	4.75	2.40	0.466	(0.143)	0.121	0.345
58	4.83	2.40	0.466	(0.143)	0.121	0.345
59	4.92	2.50	0.485	(0.143)	0.126	0.359
60	5.00	2.60	0.505	(0.143)	0.131	0.373
61	5.08	3.10	0.602	0.143	(0.156)	0.459
62	5.17	3.60	0.699	0.143	(0.182)	0.556
63	5.25	3.90	0.757	0.143	(0.197)	0.614
64	5.33	4.20	0.815	0.143	(0.212)	0.672
65	5.42	4.70	0.912	0.143	(0.237)	0.769
66	5.50	5.60	1.087	0.143	(0.283)	0.944
67	5.58	1.90	0.369	(0.143)	0.096	0.273
68	5.67	0.90	0.175	(0.143)	0.045	0.129
69	5.75	0.60	0.116	(0.143)	0.030	0.086
70	5.83	0.50	0.097	(0.143)	0.025	0.072
71	5.92	0.30	0.058	(0.143)	0.015	0.043
72	6.00	0.20	0.039	(0.143)	0.010	0.029
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	14.8

```
      Flood volume = Effective rainfall      1.23(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       0.8(Ac.Ft)
      Total soil loss =      0.39(In)
      Total soil loss =     0.259(Ac.Ft)
      Total rainfall =      1.62(In)
      Flood volume =       35872.0 Cubic Feet
      Total soil loss =       11263.7 Cubic Feet
      ---------------------------------------------------------------------------
       Peak flow rate of this hydrograph =      6.826(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        2.5       5.0       7.5      10.0
---------------------------------------------------------------------------
  0+ 5       0.0020      0.28  VQ        |         |         |         |
  0+10       0.0059      0.58  V Q       |         |         |         |
  0+15       0.0106      0.67  V Q       |         |         |         |
  0+20       0.0154      0.69  V Q       |         |         |         |
  0+25       0.0202      0.70  V Q       |         |         |         |
  0+30       0.0254      0.75  |V Q       |         |         |         |
  0+35       0.0309      0.80  |V Q       |         |         |         |
  0+40       0.0365      0.81  |V Q       |         |         |         |
  0+45       0.0421      0.81  | VQ       |         |         |         |
  0+50       0.0477      0.81  | VQ       |         |         |         |
  0+55       0.0533      0.81  | VQ       |         |         |         |
  1+ 0       0.0593      0.87  | VQ       |         |         |         |
  1+ 5       0.0656      0.92  |  Q       |         |         |         |
  1+10       0.0720      0.93  |  Q       |         |         |         |
  1+15       0.0784      0.93  |  Q       |         |         |         |
  1+20       0.0848      0.93  |  QV      |         |         |         |
  1+25       0.0912      0.93  |  QV      |         |         |         |
  1+30       0.0976      0.93  |  QV      |         |         |         |
  1+35       0.1040      0.93  |  Q V     |         |         |         |
  1+40       0.1104      0.93  |  Q V     |         |         |         |
  1+45       0.1168      0.93  |  Q V     |         |         |         |
  1+50       0.1232      0.93  |  Q V     |         |         |         |
  1+55       0.1296      0.93  |  Q  V    |         |         |         |
  2+ 0       0.1364      0.99  |  Q  V    |         |         |         |
  2+ 5       0.1432      0.98  |  Q  V    |         |         |         |
  2+10       0.1500      1.00  |  Q   V   |         |         |         |
  2+15       0.1572      1.04  |   Q  V   |         |         |         |
  2+20       0.1644      1.04  |   Q  V   |         |         |         |
  2+25       0.1716      1.05  |   Q   V  |         |         |         |
  2+30       0.1788      1.05  |   Q   V  |         |         |         |
  2+35       0.1860      1.05  |   Q    V |         |         |         |
  2+40       0.1932      1.05  |   Q    V |         |         |         |
  2+45       0.2008      1.10  |   Q    V |         |         |         |
  2+50       0.2087      1.15  |   Q     V|         |         |         |
  2+55       0.2167      1.16  |   Q     V|         |         |         |
  3+ 0       0.2247      1.16  |   Q     V|         |         |         |
  3+ 5       0.2327      1.16  |   Q      |V        |         |         |
  3+10       0.2411      1.22  |   Q      |V        |         |         |
  3+15       0.2498      1.27  |    Q     | V       |         |         |
  3+20       0.2586      1.28  |    Q     | V       |         |         |
  3+25       0.2678      1.34  |    Q     |  V      |         |         |
  3+30       0.2777      1.44  |    Q     |  V      |         |         |
  3+35       0.2884      1.55  |     Q    |   V     |         |         |
  3+40       0.2996      1.61  |     Q    |   V     |         |         |
  3+45       0.3111      1.68  |     Q    |    V    |         |         |
  3+50       0.3231      1.73  |     Q    |    V    |         |         |
  3+55       0.3354      1.80  |      Q   |     V   |         |         |
  4+ 0       0.3482      1.85  |      Q   |     V   |         |         |
  4+ 5       0.3614      1.91  |      Q   |      V  |         |         |
  4+10       0.3753      2.02  |       Q  |       V |         |         |
  4+15       0.3900      2.13  |       Q  |       V |         |         |
  4+20       0.4055      2.25  |        Q |        V|         |         |
  4+25       0.4218      2.37  |        Q |         V         |         |
  4+30       0.4385      2.43  |        Q |         |V        |         |
  4+35       0.4557      2.50  |        Q |         | V       |         |
  4+40       0.4736      2.60  |         Q|         |  V      |         |
  4+45       0.4923      2.72  |         Q|         |  V      |         |
  4+50       0.5114      2.78  |         |Q         |   V     |         |
  4+55       0.5310      2.84  |         |Q         |    V    |         |
  5+ 0       0.5514      2.95  |         |Q         |     V   |         |
  5+ 5       0.5744      3.35  |         |  Q       |      V  |         |
  5+10       0.6021      4.02  |         |     Q    |       V |         |
  5+15       0.6340      4.63  |         |       Q  |        V|         |
  5+20       0.6694      5.13  |         |         Q|         | V       |
  5+25       0.7091      5.77  |         |          |  Q      |  V      |
  5+30       0.7561      6.83  |         |          |     Q   |     V   |
  5+35       0.7893      4.82  |         |         Q|         |      V  |
  5+40       0.8041      2.15  |       Q |          |         |       V |
```

```
    5+45       0.8119      1.13  |   Q     |         |         |        v|
    5+50       0.8168      0.71  | Q       |         |         |        v|
    5+55       0.8201      0.49  |Q        |         |         |        v|
    6+ 0       0.8223      0.32  |Q        |         |         |        v|
    6+ 5       0.8233      0.14  Q         |         |         |        v|
    6+10       0.8235      0.03  Q         |         |         |        v|
    6+15       0.8235      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

        Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
                Study date  06/06/22 File: PRO102410.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =   10.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    2.587(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.587(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.021	(0.254)	0.005	0.015
2	0.17	0.07	0.021	(0.253)	0.005	0.015
3	0.25	0.07	0.021	(0.252)	0.005	0.015
4	0.33	0.10	0.031	(0.251)	0.008	0.023
5	0.42	0.10	0.031	(0.250)	0.008	0.023
6	0.50	0.10	0.031	(0.249)	0.008	0.023
7	0.58	0.10	0.031	(0.248)	0.008	0.023
8	0.67	0.10	0.031	(0.247)	0.008	0.023
9	0.75	0.10	0.031	(0.246)	0.008	0.023
10	0.83	0.13	0.041	(0.245)	0.011	0.031
11	0.92	0.13	0.041	(0.244)	0.011	0.031
12	1.00	0.13	0.041	(0.243)	0.011	0.031
13	1.08	0.10	0.031	(0.242)	0.008	0.023
14	1.17	0.10	0.031	(0.241)	0.008	0.023
15	1.25	0.10	0.031	(0.240)	0.008	0.023
16	1.33	0.10	0.031	(0.239)	0.008	0.023
17	1.42	0.10	0.031	(0.238)	0.008	0.023
18	1.50	0.10	0.031	(0.237)	0.008	0.023
19	1.58	0.10	0.031	(0.236)	0.008	0.023
20	1.67	0.10	0.031	(0.235)	0.008	0.023
21	1.75	0.10	0.031	(0.234)	0.008	0.023
22	1.83	0.13	0.041	(0.233)	0.011	0.031
23	1.92	0.13	0.041	(0.232)	0.011	0.031
24	2.00	0.13	0.041	(0.231)	0.011	0.031
25	2.08	0.13	0.041	(0.231)	0.011	0.031
26	2.17	0.13	0.041	(0.230)	0.011	0.031
27	2.25	0.13	0.041	(0.229)	0.011	0.031
28	2.33	0.13	0.041	(0.228)	0.011	0.031
29	2.42	0.13	0.041	(0.227)	0.011	0.031
30	2.50	0.13	0.041	(0.226)	0.011	0.031
31	2.58	0.17	0.052	(0.225)	0.013	0.038
32	2.67	0.17	0.052	(0.224)	0.013	0.038
33	2.75	0.17	0.052	(0.223)	0.013	0.038
34	2.83	0.17	0.052	(0.222)	0.013	0.038
35	2.92	0.17	0.052	(0.221)	0.013	0.038
36	3.00	0.17	0.052	(0.220)	0.013	0.038
37	3.08	0.17	0.052	(0.219)	0.013	0.038
38	3.17	0.17	0.052	(0.219)	0.013	0.038
39	3.25	0.17	0.052	(0.218)	0.013	0.038
40	3.33	0.17	0.052	(0.217)	0.013	0.038
41	3.42	0.17	0.052	(0.216)	0.013	0.038
42	3.50	0.17	0.052	(0.215)	0.013	0.038
43	3.58	0.17	0.052	(0.214)	0.013	0.038
44	3.67	0.17	0.052	(0.213)	0.013	0.038
45	3.75	0.17	0.052	(0.212)	0.013	0.038
46	3.83	0.20	0.062	(0.211)	0.016	0.046
47	3.92	0.20	0.062	(0.210)	0.016	0.046
48	4.00	0.20	0.062	(0.210)	0.016	0.046
49	4.08	0.20	0.062	(0.209)	0.016	0.046
50	4.17	0.20	0.062	(0.208)	0.016	0.046
51	4.25	0.20	0.062	(0.207)	0.016	0.046
52	4.33	0.23	0.072	(0.206)	0.019	0.054
53	4.42	0.23	0.072	(0.205)	0.019	0.054
54	4.50	0.23	0.072	(0.204)	0.019	0.054
55	4.58	0.23	0.072	(0.203)	0.019	0.054
56	4.67	0.23	0.072	(0.202)	0.019	0.054
57	4.75	0.23	0.072	(0.202)	0.019	0.054
58	4.83	0.27	0.083	(0.201)	0.022	0.061
59	4.92	0.27	0.083	(0.200)	0.022	0.061
60	5.00	0.27	0.083	(0.199)	0.022	0.061
61	5.08	0.20	0.062	(0.198)	0.016	0.046
62	5.17	0.20	0.062	(0.197)	0.016	0.046
63	5.25	0.20	0.062	(0.196)	0.016	0.046
64	5.33	0.23	0.072	(0.196)	0.019	0.054
65	5.42	0.23	0.072	(0.195)	0.019	0.054
66	5.50	0.23	0.072	(0.194)	0.019	0.054
67	5.58	0.27	0.083	(0.193)	0.022	0.061
68	5.67	0.27	0.083	(0.192)	0.022	0.061
69	5.75	0.27	0.083	(0.191)	0.022	0.061
70	5.83	0.27	0.083	(0.190)	0.022	0.061
71	5.92	0.27	0.083	(0.190)	0.022	0.061
72	6.00	0.27	0.083	(0.189)	0.022	0.061
73	6.08	0.30	0.093	(0.188)	0.024	0.069
74	6.17	0.30	0.093	(0.187)	0.024	0.069

75	6.25	0.30	0.093	(0.186)	0.024	0.069
76	6.33	0.30	0.093	(0.185)	0.024	0.069
77	6.42	0.30	0.093	(0.185)	0.024	0.069
78	6.50	0.30	0.093	(0.184)	0.024	0.069
79	6.58	0.33	0.103	(0.183)	0.027	0.077
80	6.67	0.33	0.103	(0.182)	0.027	0.077
81	6.75	0.33	0.103	(0.181)	0.027	0.077
82	6.83	0.33	0.103	(0.181)	0.027	0.077
83	6.92	0.33	0.103	(0.180)	0.027	0.077
84	7.00	0.33	0.103	(0.179)	0.027	0.077
85	7.08	0.33	0.103	(0.178)	0.027	0.077
86	7.17	0.33	0.103	(0.177)	0.027	0.077
87	7.25	0.33	0.103	(0.176)	0.027	0.077
88	7.33	0.37	0.114	(0.176)	0.030	0.084
89	7.42	0.37	0.114	(0.175)	0.030	0.084
90	7.50	0.37	0.114	(0.174)	0.030	0.084
91	7.58	0.40	0.124	(0.173)	0.032	0.092
92	7.67	0.40	0.124	(0.172)	0.032	0.092
93	7.75	0.40	0.124	(0.172)	0.032	0.092
94	7.83	0.43	0.135	(0.171)	0.035	0.100
95	7.92	0.43	0.135	(0.170)	0.035	0.100
96	8.00	0.43	0.135	(0.169)	0.035	0.100
97	8.08	0.50	0.155	(0.168)	0.040	0.115
98	8.17	0.50	0.155	(0.168)	0.040	0.115
99	8.25	0.50	0.155	(0.167)	0.040	0.115
100	8.33	0.50	0.155	(0.166)	0.040	0.115
101	8.42	0.50	0.155	(0.165)	0.040	0.115
102	8.50	0.50	0.155	(0.165)	0.040	0.115
103	8.58	0.53	0.166	(0.164)	0.043	0.123
104	8.67	0.53	0.166	(0.163)	0.043	0.123
105	8.75	0.53	0.166	(0.162)	0.043	0.123
106	8.83	0.57	0.176	(0.162)	0.046	0.130
107	8.92	0.57	0.176	(0.161)	0.046	0.130
108	9.00	0.57	0.176	(0.160)	0.046	0.130
109	9.08	0.63	0.197	(0.159)	0.051	0.146
110	9.17	0.63	0.197	(0.158)	0.051	0.146
111	9.25	0.63	0.197	(0.158)	0.051	0.146
112	9.33	0.67	0.207	(0.157)	0.054	0.153
113	9.42	0.67	0.207	(0.156)	0.054	0.153
114	9.50	0.67	0.207	(0.155)	0.054	0.153
115	9.58	0.70	0.217	(0.155)	0.057	0.161
116	9.67	0.70	0.217	(0.154)	0.057	0.161
117	9.75	0.70	0.217	(0.153)	0.057	0.161
118	9.83	0.73	0.228	(0.153)	0.059	0.168
119	9.92	0.73	0.228	(0.152)	0.059	0.168
120	10.00	0.73	0.228	(0.151)	0.059	0.168
121	10.08	0.50	0.155	(0.150)	0.040	0.115
122	10.17	0.50	0.155	(0.150)	0.040	0.115
123	10.25	0.50	0.155	(0.149)	0.040	0.115
124	10.33	0.50	0.155	(0.148)	0.040	0.115
125	10.42	0.50	0.155	(0.147)	0.040	0.115
126	10.50	0.50	0.155	(0.147)	0.040	0.115
127	10.58	0.67	0.207	(0.146)	0.054	0.153
128	10.67	0.67	0.207	(0.145)	0.054	0.153
129	10.75	0.67	0.207	(0.145)	0.054	0.153
130	10.83	0.67	0.207	(0.144)	0.054	0.153
131	10.92	0.67	0.207	(0.143)	0.054	0.153
132	11.00	0.67	0.207	(0.142)	0.054	0.153
133	11.08	0.63	0.197	(0.142)	0.051	0.146
134	11.17	0.63	0.197	(0.141)	0.051	0.146
135	11.25	0.63	0.197	(0.140)	0.051	0.146
136	11.33	0.63	0.197	(0.140)	0.051	0.146
137	11.42	0.63	0.197	(0.139)	0.051	0.146
138	11.50	0.63	0.197	(0.138)	0.051	0.146
139	11.58	0.57	0.176	(0.138)	0.046	0.130
140	11.67	0.57	0.176	(0.137)	0.046	0.130
141	11.75	0.57	0.176	(0.136)	0.046	0.130
142	11.83	0.60	0.186	(0.136)	0.048	0.138
143	11.92	0.60	0.186	(0.135)	0.048	0.138
144	12.00	0.60	0.186	(0.134)	0.048	0.138
145	12.08	0.83	0.259	(0.134)	0.067	0.191
146	12.17	0.83	0.259	(0.133)	0.067	0.191
147	12.25	0.83	0.259	(0.132)	0.067	0.191
148	12.33	0.87	0.269	(0.132)	0.070	0.199
149	12.42	0.87	0.269	(0.131)	0.070	0.199
150	12.50	0.87	0.269	(0.130)	0.070	0.199
151	12.58	0.93	0.290	(0.130)	0.075	0.214
152	12.67	0.93	0.290	(0.129)	0.075	0.214
153	12.75	0.93	0.290	(0.128)	0.075	0.214
154	12.83	0.97	0.300	(0.128)	0.078	0.222
155	12.92	0.97	0.300	(0.127)	0.078	0.222
156	13.00	0.97	0.300	(0.126)	0.078	0.222
157	13.08	1.13	0.352	(0.126)	0.091	0.260
158	13.17	1.13	0.352	(0.125)	0.091	0.260
159	13.25	1.13	0.352	(0.124)	0.091	0.260
160	13.33	1.13	0.352	(0.124)	0.091	0.260
161	13.42	1.13	0.352	(0.123)	0.091	0.260

162	13.50	1.13	0.352	(0.123)	0.091	0.260
163	13.58	0.77	0.238	(0.122)	0.062	0.176
164	13.67	0.77	0.238	(0.121)	0.062	0.176
165	13.75	0.77	0.238	(0.121)	0.062	0.176
166	13.83	0.77	0.238	(0.120)	0.062	0.176
167	13.92	0.77	0.238	(0.119)	0.062	0.176
168	14.00	0.77	0.238	(0.119)	0.062	0.176
169	14.08	0.90	0.279	(0.118)	0.073	0.207
170	14.17	0.90	0.279	(0.118)	0.073	0.207
171	14.25	0.90	0.279	(0.117)	0.073	0.207
172	14.33	0.87	0.269	(0.116)	0.070	0.199
173	14.42	0.87	0.269	(0.116)	0.070	0.199
174	14.50	0.87	0.269	(0.115)	0.070	0.199
175	14.58	0.87	0.269	(0.115)	0.070	0.199
176	14.67	0.87	0.269	(0.114)	0.070	0.199
177	14.75	0.87	0.269	(0.113)	0.070	0.199
178	14.83	0.83	0.259	(0.113)	0.067	0.191
179	14.92	0.83	0.259	(0.112)	0.067	0.191
180	15.00	0.83	0.259	(0.112)	0.067	0.191
181	15.08	0.80	0.248	(0.111)	0.065	0.184
182	15.17	0.80	0.248	(0.111)	0.065	0.184
183	15.25	0.80	0.248	(0.110)	0.065	0.184
184	15.33	0.77	0.238	(0.109)	0.062	0.176
185	15.42	0.77	0.238	(0.109)	0.062	0.176
186	15.50	0.77	0.238	(0.108)	0.062	0.176
187	15.58	0.63	0.197	(0.108)	0.051	0.146
188	15.67	0.63	0.197	(0.107)	0.051	0.146
189	15.75	0.63	0.197	(0.107)	0.051	0.146
190	15.83	0.63	0.197	(0.106)	0.051	0.146
191	15.92	0.63	0.197	(0.106)	0.051	0.146
192	16.00	0.63	0.197	(0.105)	0.051	0.146
193	16.08	0.13	0.041	(0.104)	0.011	0.031
194	16.17	0.13	0.041	(0.104)	0.011	0.031
195	16.25	0.13	0.041	(0.103)	0.011	0.031
196	16.33	0.13	0.041	(0.103)	0.011	0.031
197	16.42	0.13	0.041	(0.102)	0.011	0.031
198	16.50	0.13	0.041	(0.102)	0.011	0.031
199	16.58	0.10	0.031	(0.101)	0.008	0.023
200	16.67	0.10	0.031	(0.101)	0.008	0.023
201	16.75	0.10	0.031	(0.100)	0.008	0.023
202	16.83	0.10	0.031	(0.100)	0.008	0.023
203	16.92	0.10	0.031	(0.099)	0.008	0.023
204	17.00	0.10	0.031	(0.099)	0.008	0.023
205	17.08	0.17	0.052	(0.098)	0.013	0.038
206	17.17	0.17	0.052	(0.098)	0.013	0.038
207	17.25	0.17	0.052	(0.097)	0.013	0.038
208	17.33	0.17	0.052	(0.097)	0.013	0.038
209	17.42	0.17	0.052	(0.096)	0.013	0.038
210	17.50	0.17	0.052	(0.096)	0.013	0.038
211	17.58	0.17	0.052	(0.095)	0.013	0.038
212	17.67	0.17	0.052	(0.095)	0.013	0.038
213	17.75	0.17	0.052	(0.094)	0.013	0.038
214	17.83	0.13	0.041	(0.094)	0.011	0.031
215	17.92	0.13	0.041	(0.093)	0.011	0.031
216	18.00	0.13	0.041	(0.093)	0.011	0.031
217	18.08	0.13	0.041	(0.093)	0.011	0.031
218	18.17	0.13	0.041	(0.092)	0.011	0.031
219	18.25	0.13	0.041	(0.092)	0.011	0.031
220	18.33	0.13	0.041	(0.091)	0.011	0.031
221	18.42	0.13	0.041	(0.091)	0.011	0.031
222	18.50	0.13	0.041	(0.090)	0.011	0.031
223	18.58	0.10	0.031	(0.090)	0.008	0.023
224	18.67	0.10	0.031	(0.089)	0.008	0.023
225	18.75	0.10	0.031	(0.089)	0.008	0.023
226	18.83	0.07	0.021	(0.089)	0.005	0.015
227	18.92	0.07	0.021	(0.088)	0.005	0.015
228	19.00	0.07	0.021	(0.088)	0.005	0.015
229	19.08	0.10	0.031	(0.087)	0.008	0.023
230	19.17	0.10	0.031	(0.087)	0.008	0.023
231	19.25	0.10	0.031	(0.087)	0.008	0.023
232	19.33	0.13	0.041	(0.086)	0.011	0.031
233	19.42	0.13	0.041	(0.086)	0.011	0.031
234	19.50	0.13	0.041	(0.085)	0.011	0.031
235	19.58	0.10	0.031	(0.085)	0.008	0.023
236	19.67	0.10	0.031	(0.085)	0.008	0.023
237	19.75	0.10	0.031	(0.084)	0.008	0.023
238	19.83	0.07	0.021	(0.084)	0.005	0.015
239	19.92	0.07	0.021	(0.083)	0.005	0.015
240	20.00	0.07	0.021	(0.083)	0.005	0.015
241	20.08	0.10	0.031	(0.083)	0.008	0.023
242	20.17	0.10	0.031	(0.082)	0.008	0.023
243	20.25	0.10	0.031	(0.082)	0.008	0.023
244	20.33	0.10	0.031	(0.082)	0.008	0.023
245	20.42	0.10	0.031	(0.081)	0.008	0.023
246	20.50	0.10	0.031	(0.081)	0.008	0.023
247	20.58	0.10	0.031	(0.081)	0.008	0.023
248	20.67	0.10	0.031	(0.080)	0.008	0.023

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249  20.75     0.10      0.031       (  0.080)       0.008        0.023
250  20.83     0.07      0.021       (  0.080)       0.005        0.015
251  20.92     0.07      0.021       (  0.079)       0.005        0.015
252  21.00     0.07      0.021       (  0.079)       0.005        0.015
253  21.08     0.10      0.031       (  0.079)       0.008        0.023
254  21.17     0.10      0.031       (  0.078)       0.008        0.023
255  21.25     0.10      0.031       (  0.078)       0.008        0.023
256  21.33     0.07      0.021       (  0.078)       0.005        0.015
257  21.42     0.07      0.021       (  0.077)       0.005        0.015
258  21.50     0.07      0.021       (  0.077)       0.005        0.015
259  21.58     0.10      0.031       (  0.077)       0.008        0.023
260  21.67     0.10      0.031       (  0.077)       0.008        0.023
261  21.75     0.10      0.031       (  0.076)       0.008        0.023
262  21.83     0.07      0.021       (  0.076)       0.005        0.015
263  21.92     0.07      0.021       (  0.076)       0.005        0.015
264  22.00     0.07      0.021       (  0.076)       0.005        0.015
265  22.08     0.10      0.031       (  0.075)       0.008        0.023
266  22.17     0.10      0.031       (  0.075)       0.008        0.023
267  22.25     0.10      0.031       (  0.075)       0.008        0.023
268  22.33     0.07      0.021       (  0.075)       0.005        0.015
269  22.42     0.07      0.021       (  0.074)       0.005        0.015
270  22.50     0.07      0.021       (  0.074)       0.005        0.015
271  22.58     0.07      0.021       (  0.074)       0.005        0.015
272  22.67     0.07      0.021       (  0.074)       0.005        0.015
273  22.75     0.07      0.021       (  0.073)       0.005        0.015
274  22.83     0.07      0.021       (  0.073)       0.005        0.015
275  22.92     0.07      0.021       (  0.073)       0.005        0.015
276  23.00     0.07      0.021       (  0.073)       0.005        0.015
277  23.08     0.07      0.021       (  0.073)       0.005        0.015
278  23.17     0.07      0.021       (  0.073)       0.005        0.015
279  23.25     0.07      0.021       (  0.072)       0.005        0.015
280  23.33     0.07      0.021       (  0.072)       0.005        0.015
281  23.42     0.07      0.021       (  0.072)       0.005        0.015
282  23.50     0.07      0.021       (  0.072)       0.005        0.015
283  23.58     0.07      0.021       (  0.072)       0.005        0.015
284  23.67     0.07      0.021       (  0.072)       0.005        0.015
285  23.75     0.07      0.021       (  0.072)       0.005        0.015
286  23.83     0.07      0.021       (  0.072)       0.005        0.015
287  23.92     0.07      0.021       (  0.072)       0.005        0.015
288  24.00     0.07      0.021       (  0.072)       0.005        0.015
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    23.0
      Flood volume = Effective rainfall      1.91(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       1.3(Ac.Ft)
      Total soil loss =      0.67(In)
      Total soil loss =     0.450(Ac.Ft)
      Total rainfall =      2.59(In)
      Flood volume =       55809.4 Cubic Feet
      Total soil loss =       19608.7 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      2.108(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        2.5       5.0       7.5      10.0
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   0+ 5       0.0004      0.06  Q          |         |         |         |
   0+10       0.0012      0.11  Q          |         |         |         |
   0+15       0.0020      0.12  Q          |         |         |         |
   0+20       0.0031      0.15  Q          |         |         |         |
   0+25       0.0043      0.18  Q          |         |         |         |
   0+30       0.0056      0.18  Q          |         |         |         |
   0+35       0.0069      0.19  Q          |         |         |         |
   0+40       0.0082      0.19  Q          |         |         |         |
   0+45       0.0094      0.19  Q          |         |         |         |
   0+50       0.0109      0.22  Q          |         |         |         |
   0+55       0.0126      0.24  Q          |         |         |         |
   1+ 0       0.0143      0.25  Q          |         |         |         |
   1+ 5       0.0158      0.22  Q          |         |         |         |
   1+10       0.0171      0.19  Q          |         |         |         |
   1+15       0.0184      0.19  Q          |         |         |         |
   1+20       0.0197      0.19  Q          |         |         |         |
   1+25       0.0210      0.19  Q          |         |         |         |
   1+30       0.0222      0.19  Q          |         |         |         |
   1+35       0.0235      0.19  Q          |         |         |         |
   1+40       0.0248      0.19  Q          |         |         |         |
   1+45       0.0261      0.19  Q          |         |         |         |
   1+50       0.0276      0.22  Q          |         |         |         |
   1+55       0.0292      0.24  Q          |         |         |         |
   2+ 0       0.0309      0.25  Q          |         |         |         |
   2+ 5       0.0326      0.25  QV         |         |         |         |
   2+10       0.0344      0.25  QV         |         |         |         |
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2+15        0.0361      0.25  QV        |         |         |         |
2+20        0.0378      0.25  QV        |         |         |         |
2+25        0.0395      0.25  QV        |         |         |         |
2+30        0.0412      0.25  QV        |         |         |         |
2+35        0.0431      0.28  |Q        |         |         |         |
2+40        0.0452      0.30  |Q        |         |         |         |
2+45        0.0473      0.31  |Q        |         |         |         |
2+50        0.0495      0.31  |Q        |         |         |         |
2+55        0.0516      0.31  |Q        |         |         |         |
3+ 0        0.0537      0.31  |Q        |         |         |         |
3+ 5        0.0559      0.31  |Q        |         |         |         |
3+10        0.0580      0.31  |Q        |         |         |         |
3+15        0.0601      0.31  |Q        |         |         |         |
3+20        0.0623      0.31  |Q        |         |         |         |
3+25        0.0644      0.31  |QV       |         |         |         |
3+30        0.0665      0.31  |QV       |         |         |         |
3+35        0.0687      0.31  |QV       |         |         |         |
3+40        0.0708      0.31  |QV       |         |         |         |
3+45        0.0729      0.31  |QV       |         |         |         |
3+50        0.0753      0.34  |QV       |         |         |         |
3+55        0.0778      0.37  |QV       |         |         |         |
4+ 0        0.0804      0.37  |QV       |         |         |         |
4+ 5        0.0829      0.37  |QV       |         |         |         |
4+10        0.0855      0.37  |QV       |         |         |         |
4+15        0.0880      0.37  |QV       |         |         |         |
4+20        0.0908      0.40  |QV       |         |         |         |
4+25        0.0938      0.43  |QV       |         |         |         |
4+30        0.0967      0.43  |Q V      |         |         |         |
4+35        0.0997      0.43  |Q V      |         |         |         |
4+40        0.1027      0.43  |Q V      |         |         |         |
4+45        0.1057      0.43  |Q V      |         |         |         |
4+50        0.1089      0.46  |Q V      |         |         |         |
4+55        0.1123      0.49  |Q V      |         |         |         |
5+ 0        0.1157      0.49  |Q V      |         |         |         |
5+ 5        0.1187      0.44  |Q V      |         |         |         |
5+10        0.1213      0.38  |Q V      |         |         |         |
5+15        0.1239      0.38  |Q V      |         |         |         |
5+20        0.1267      0.40  |Q V      |         |         |         |
5+25        0.1296      0.43  |Q  V     |         |         |         |
5+30        0.1326      0.43  |Q  V     |         |         |         |
5+35        0.1358      0.46  |Q  V     |         |         |         |
5+40        0.1392      0.49  |Q  V     |         |         |         |
5+45        0.1426      0.49  |Q  V     |         |         |         |
5+50        0.1460      0.50  |Q  V     |         |         |         |
5+55        0.1494      0.50  |Q  V     |         |         |         |
6+ 0        0.1528      0.50  |Q  V     |         |         |         |
6+ 5        0.1565      0.53  | Q V     |         |         |         |
6+10        0.1603      0.55  | Q  V    |         |         |         |
6+15        0.1641      0.56  | Q  V    |         |         |         |
6+20        0.1679      0.56  | Q  V    |         |         |         |
6+25        0.1718      0.56  | Q  V    |         |         |         |
6+30        0.1756      0.56  | Q  V    |         |         |         |
6+35        0.1797      0.59  | Q  V    |         |         |         |
6+40        0.1839      0.61  | Q  V    |         |         |         |
6+45        0.1882      0.62  | Q  V    |         |         |         |
6+50        0.1924      0.62  | Q   V   |         |         |         |
6+55        0.1967      0.62  | Q   V   |         |         |         |
7+ 0        0.2010      0.62  | Q   V   |         |         |         |
7+ 5        0.2053      0.62  | Q   V   |         |         |         |
7+10        0.2095      0.62  | Q   V   |         |         |         |
7+15        0.2138      0.62  | Q   V   |         |         |         |
7+20        0.2183      0.65  | Q   V   |         |         |         |
7+25        0.2229      0.68  | Q   V   |         |         |         |
7+30        0.2276      0.68  | Q    V  |         |         |         |
7+35        0.2325      0.71  | Q    V  |         |         |         |
7+40        0.2376      0.74  | Q    V  |         |         |         |
7+45        0.2427      0.74  | Q    V  |         |         |         |
7+50        0.2481      0.77  |  Q   V  |         |         |         |
7+55        0.2536      0.80  |  Q   V  |         |         |         |
8+ 0        0.2591      0.80  |  Q    V |         |         |         |
8+ 5        0.2651      0.87  |  Q    V |         |         |         |
8+10        0.2714      0.92  |  Q    V |         |         |         |
8+15        0.2778      0.93  |  Q    V |         |         |         |
8+20        0.2842      0.93  |  Q    V |         |         |         |
8+25        0.2906      0.93  |  Q     V|         |         |         |
8+30        0.2970      0.93  |  Q     V|         |         |         |
8+35        0.3036      0.96  |  Q     V|         |         |         |
8+40        0.3104      0.99  |  Q     V|         |         |         |
8+45        0.3172      0.99  |  Q     V|         |         |         |
8+50        0.3243      1.02  |   Q     V         |         |         |
8+55        0.3315      1.05  |   Q     V         |         |         |
9+ 0        0.3387      1.05  |   Q     V         |         |         |
9+ 5        0.3464      1.11  |   Q     V         |         |         |
9+10        0.3544      1.17  |   Q      |V       |         |         |
9+15        0.3625      1.17  |   Q      |V       |         |         |
9+20        0.3709      1.21  |   Q      |V       |         |         |
9+25        0.3793      1.23  |   Q      |V       |         |         |
```

9+30	0.3879	1.24	Q	V			
9+35	0.3966	1.27	Q	V			
9+40	0.4056	1.30	Q	V			
9+45	0.4145	1.30	Q	V			
9+50	0.4237	1.33	Q	V			
9+55	0.4330	1.36	Q	V			
10+ 0	0.4424	1.36	Q	V			
10+ 5	0.4504	1.15	Q	V			
10+10	0.4571	0.97	Q	V			
10+15	0.4636	0.94	Q	V			
10+20	0.4700	0.93	Q	V			
10+25	0.4764	0.93	Q	V			
10+30	0.4828	0.93	Q	V			
10+35	0.4902	1.08	Q	V			
10+40	0.4985	1.21	Q	V			
10+45	0.5070	1.23	Q	V			
10+50	0.5156	1.24	Q	V			
10+55	0.5241	1.24	Q	V			
11+ 0	0.5327	1.24	Q	V			
11+ 5	0.5410	1.21	Q	V			
11+10	0.5491	1.18	Q	V			
11+15	0.5573	1.18	Q	V			
11+20	0.5654	1.18	Q	V			
11+25	0.5735	1.18	Q	V			
11+30	0.5816	1.18	Q	V			
11+35	0.5893	1.12	Q	V			
11+40	0.5967	1.07	Q	V			
11+45	0.6039	1.06	Q	V			
11+50	0.6114	1.08	Q	V			
11+55	0.6191	1.11	Q	V			
12+ 0	0.6267	1.11	Q	V			
12+ 5	0.6359	1.33	Q	V			
12+10	0.6463	1.51	Q	V			
12+15	0.6569	1.54	Q	V			
12+20	0.6677	1.58	Q	V			
12+25	0.6788	1.61	Q	V			
12+30	0.6899	1.61	Q	V			
12+35	0.7014	1.67	Q	V			
12+40	0.7133	1.72	Q	V			
12+45	0.7252	1.73	Q	V			
12+50	0.7374	1.77	Q	V			
12+55	0.7497	1.79	Q	V			
13+ 0	0.7621	1.80	Q	V			
13+ 5	0.7755	1.95	Q	V			
13+10	0.7898	2.08	Q	V			
13+15	0.8043	2.10	Q	V			
13+20	0.8188	2.11	Q	V			
13+25	0.8333	2.11	Q	V			
13+30	0.8479	2.11	Q	V			
13+35	0.8601	1.77	Q	V			
13+40	0.8704	1.50	Q	V			
13+45	0.8803	1.44	Q	V			
13+50	0.8901	1.43	Q	V			
13+55	0.9000	1.43	Q	V			
14+ 0	0.9098	1.43	Q	V			
14+ 5	0.9205	1.55	Q	V			
14+10	0.9318	1.65	Q	V			
14+15	0.9433	1.67	Q	V			
14+20	0.9546	1.64	Q	V			
14+25	0.9658	1.62	Q	V			
14+30	0.9769	1.61	Q	V			
14+35	0.9880	1.61	Q	V			
14+40	0.9991	1.61	Q	V			
14+45	1.0102	1.61	Q	V			
14+50	1.0211	1.58	Q	V			
14+55	1.0318	1.56	Q	V			
15+ 0	1.0425	1.55	Q	V			
15+ 5	1.0530	1.52	Q	V			
15+10	1.0633	1.49	Q	V			
15+15	1.0735	1.49	Q	V			
15+20	1.0836	1.46	Q	V			
15+25	1.0934	1.43	Q	V			
15+30	1.1033	1.43	Q	V			
15+35	1.1122	1.30	Q	V			
15+40	1.1205	1.20	Q	V			
15+45	1.1287	1.18	Q	V			
15+50	1.1368	1.18	Q	V			
15+55	1.1449	1.18	Q	V			
16+ 0	1.1530	1.18	Q	V			
16+ 5	1.1580	0.72	Q	V			
16+10	1.1604	0.34	Q	V			
16+15	1.1622	0.27	Q	V			
16+20	1.1640	0.25	Q	V			
16+25	1.1657	0.25	Q	V			
16+30	1.1674	0.25	Q	V			
16+35	1.1689	0.22	Q	V			
16+40	1.1702	0.19	Q	V			

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16+45       1.1715      0.19  Q          |          |          |      V    |
16+50       1.1728      0.19  Q          |          |          |      V    |
16+55       1.1740      0.19  Q          |          |          |      V    |
17+ 0       1.1753      0.19  Q          |          |          |      V    |
17+ 5       1.1770      0.25  Q          |          |          |      V    |
17+10       1.1791      0.30  |Q         |          |          |      V    |
17+15       1.1812      0.31  |Q         |          |          |      V    |
17+20       1.1833      0.31  |Q         |          |          |      V    |
17+25       1.1855      0.31  |Q         |          |          |       V   |
17+30       1.1876      0.31  |Q         |          |          |       V   |
17+35       1.1897      0.31  |Q         |          |          |       V   |
17+40       1.1919      0.31  |Q         |          |          |       V   |
17+45       1.1940      0.31  |Q         |          |          |       V   |
17+50       1.1959      0.28  |Q         |          |          |       V   |
17+55       1.1977      0.25  |Q         |          |          |       V   |
18+ 0       1.1994      0.25  Q          |          |          |       V   |
18+ 5       1.2011      0.25  Q          |          |          |       V   |
18+10       1.2028      0.25  Q          |          |          |       V   |
18+15       1.2045      0.25  Q          |          |          |       V   |
18+20       1.2062      0.25  Q          |          |          |       V   |
18+25       1.2079      0.25  Q          |          |          |       V   |
18+30       1.2097      0.25  Q          |          |          |       V   |
18+35       1.2112      0.22  Q          |          |          |       V   |
18+40       1.2125      0.19  Q          |          |          |       V   |
18+45       1.2138      0.19  Q          |          |          |       V   |
18+50       1.2148      0.16  Q          |          |          |       V   |
18+55       1.2157      0.13  Q          |          |          |       V   |
19+ 0       1.2166      0.13  Q          |          |          |       V   |
19+ 5       1.2177      0.15  Q          |          |          |        V  |
19+10       1.2189      0.18  Q          |          |          |        V  |
19+15       1.2202      0.18  Q          |          |          |        V  |
19+20       1.2217      0.22  Q          |          |          |        V  |
19+25       1.2233      0.24  Q          |          |          |        V  |
19+30       1.2250      0.25  Q          |          |          |        V  |
19+35       1.2265      0.22  Q          |          |          |        V  |
19+40       1.2278      0.19  Q          |          |          |        V  |
19+45       1.2291      0.19  Q          |          |          |        V  |
19+50       1.2302      0.16  Q          |          |          |        V  |
19+55       1.2311      0.13  Q          |          |          |        V  |
20+ 0       1.2320      0.13  Q          |          |          |        V  |
20+ 5       1.2330      0.15  Q          |          |          |        V  |
20+10       1.2343      0.18  Q          |          |          |        V  |
20+15       1.2355      0.18  Q          |          |          |        V  |
20+20       1.2368      0.19  Q          |          |          |        V  |
20+25       1.2381      0.19  Q          |          |          |        V  |
20+30       1.2394      0.19  Q          |          |          |        V  |
20+35       1.2407      0.19  Q          |          |          |        V  |
20+40       1.2420      0.19  Q          |          |          |        V  |
20+45       1.2432      0.19  Q          |          |          |        V  |
20+50       1.2443      0.16  Q          |          |          |        V  |
20+55       1.2452      0.13  Q          |          |          |        V  |
21+ 0       1.2461      0.13  Q          |          |          |        V  |
21+ 5       1.2471      0.15  Q          |          |          |        V  |
21+10       1.2484      0.18  Q          |          |          |        V  |
21+15       1.2496      0.18  Q          |          |          |         V |
21+20       1.2507      0.16  Q          |          |          |         V |
21+25       1.2516      0.13  Q          |          |          |         V |
21+30       1.2525      0.13  Q          |          |          |         V |
21+35       1.2535      0.15  Q          |          |          |         V |
21+40       1.2548      0.18  Q          |          |          |         V |
21+45       1.2560      0.18  Q          |          |          |         V |
21+50       1.2571      0.16  Q          |          |          |         V |
21+55       1.2580      0.13  Q          |          |          |         V |
22+ 0       1.2589      0.13  Q          |          |          |         V |
22+ 5       1.2599      0.15  Q          |          |          |         V |
22+10       1.2612      0.18  Q          |          |          |         V |
22+15       1.2625      0.18  Q          |          |          |         V |
22+20       1.2635      0.16  Q          |          |          |         V |
22+25       1.2644      0.13  Q          |          |          |         V |
22+30       1.2653      0.13  Q          |          |          |         V |
22+35       1.2661      0.12  Q          |          |          |         V |
22+40       1.2670      0.12  Q          |          |          |         V |
22+45       1.2678      0.12  Q          |          |          |         V |
22+50       1.2687      0.12  Q          |          |          |         V |
22+55       1.2696      0.12  Q          |          |          |         V |
23+ 0       1.2704      0.12  Q          |          |          |         V |
23+ 5       1.2713      0.12  Q          |          |          |         V |
23+10       1.2721      0.12  Q          |          |          |         V |
23+15       1.2730      0.12  Q          |          |          |         V |
23+20       1.2738      0.12  Q          |          |          |         V |
23+25       1.2747      0.12  Q          |          |          |         V |
23+30       1.2755      0.12  Q          |          |          |         V |
23+35       1.2764      0.12  Q          |          |          |         V |
23+40       1.2772      0.12  Q          |          |          |         V |
23+45       1.2781      0.12  Q          |          |          |         V |
23+50       1.2790      0.12  Q          |          |          |         V |
23+55       1.2798      0.12  Q          |          |          |         V |
```

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   24+ 0       1.2807      0.12  Q         |         |         |        V|
   24+ 5       1.2811      0.06  Q         |         |         |        V|
   24+10       1.2812      0.01  Q         |         |         |        V|
   24+15       1.2812      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
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        U n i t   H y d r o g r a p h   A n a l y s i s

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.50                 4.01

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.30                10.44

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.500(In)
Area Averaged 100-Year Rainfall =    1.300(In)

Point rain (area averaged) =    1.300(In)
Areal adjustment factor =   99.99 %
Adjusted average point rain =    1.300(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.260
------------------------------------------------------------------------
Slope of intensity-duration curve for a 1 hour storm =0.5000
------------------------------------------------------------------------

               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	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	4.20	0.655	0.143	(0.170)	0.512
2	0.17	4.30	0.671	0.143	(0.174)	0.528
3	0.25	5.00	0.780	0.143	(0.203)	0.637
4	0.33	5.00	0.780	0.143	(0.203)	0.637
5	0.42	5.80	0.905	0.143	(0.235)	0.762
6	0.50	6.50	1.014	0.143	(0.264)	0.871
7	0.58	7.40	1.154	0.143	(0.300)	1.011
8	0.67	8.60	1.342	0.143	(0.349)	1.198
9	0.75	12.30	1.919	0.143	(0.499)	1.776
10	0.83	29.10	4.539	0.143	(1.180)	4.396
11	0.92	6.80	1.061	0.143	(0.276)	0.918
12	1.00	5.00	0.780	0.143	(0.203)	0.637
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	13.9

Flood volume = Effective rainfall 1.16(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 0.14(In)
Total soil loss = 0.096(Ac.Ft)
Total rainfall = 1.30(In)
Flood volume = 33721.8 Cubic Feet
Total soil loss = 4169.0 Cubic Feet

Peak flow rate of this hydrograph = 24.242(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	7.5	15.0	22.5	30.0
0+ 5	0.0140	2.03	V Q				
0+10	0.0401	3.79	| V Q				
0+15	0.0716	4.58	| V Q				
0+20	0.1065	5.06	| VQ				
0+25	0.1453	5.63	| Q				
0+30	0.1900	6.50	| QV				
0+35	0.2416	7.49	| Q V				
0+40	0.3022	8.79	| Q V				
0+45	0.3835	11.81	| Q V				
0+50	0.5504	24.24	| V | Q				
0+55	0.6851	19.55	| Q | V				
1+ 0	0.7444	8.62	| Q | V				
1+ 5	0.7692	3.60	| Q | V				
1+10	0.7732	0.58	Q | V				
1+15	0.7741	0.13	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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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           0.80                 6.42

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           1.80                14.45

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    0.800(In)
Area Averaged 100-Year Rainfall =    1.800(In)

Point rain (area averaged) =    1.800(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    1.800(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
		Sum = 100.000	Sum=	8.093

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	0.281	(0.143)	0.073	0.208
2	0.17	1.30	0.281	(0.143)	0.073	0.208
3	0.25	1.10	0.238	(0.143)	0.062	0.176
4	0.33	1.50	0.324	(0.143)	0.084	0.240
5	0.42	1.50	0.324	(0.143)	0.084	0.240
6	0.50	1.80	0.389	(0.143)	0.101	0.288
7	0.58	1.50	0.324	(0.143)	0.084	0.240
8	0.67	1.80	0.389	(0.143)	0.101	0.288
9	0.75	1.80	0.389	(0.143)	0.101	0.288
10	0.83	1.50	0.324	(0.143)	0.084	0.240
11	0.92	1.60	0.346	(0.143)	0.090	0.256
12	1.00	1.80	0.389	(0.143)	0.101	0.288
13	1.08	2.20	0.475	(0.143)	0.124	0.352
14	1.17	2.20	0.475	(0.143)	0.124	0.352
15	1.25	2.20	0.475	(0.143)	0.124	0.352
16	1.33	2.00	0.432	(0.143)	0.112	0.320
17	1.42	2.60	0.562	0.143	(0.146)	0.419
18	1.50	2.70	0.583	0.143	(0.152)	0.440
19	1.58	2.40	0.518	(0.143)	0.135	0.384
20	1.67	2.70	0.583	0.143	(0.152)	0.440
21	1.75	3.30	0.713	0.143	(0.185)	0.570
22	1.83	3.10	0.670	0.143	(0.174)	0.527
23	1.92	2.90	0.626	0.143	(0.163)	0.483
24	2.00	3.00	0.648	0.143	(0.168)	0.505
25	2.08	3.10	0.670	0.143	(0.174)	0.527
26	2.17	4.20	0.907	0.143	(0.236)	0.764
27	2.25	5.00	1.080	0.143	(0.281)	0.937
28	2.33	3.50	0.756	0.143	(0.197)	0.613
29	2.42	6.80	1.469	0.143	(0.382)	1.326
30	2.50	7.30	1.577	0.143	(0.410)	1.434
31	2.58	8.20	1.771	0.143	(0.460)	1.628
32	2.67	5.90	1.274	0.143	(0.331)	1.131
33	2.75	2.00	0.432	(0.143)	0.112	0.320
34	2.83	1.80	0.389	(0.143)	0.101	0.288
35	2.92	1.80	0.389	(0.143)	0.101	0.288
36	3.00	0.60	0.130	(0.143)	0.034	0.096
		(Loss Rate Not Used)				
Sum =		100.0			Sum =	17.4

Flood volume = Effective rainfall 1.45(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 1.0(Ac.Ft)
Total soil loss = 0.35(In)
Total soil loss = 0.231(Ac.Ft)
Total rainfall = 1.80(In)
Flood volume = 42385.0 Cubic Feet
Total soil loss = 10081.2 Cubic Feet

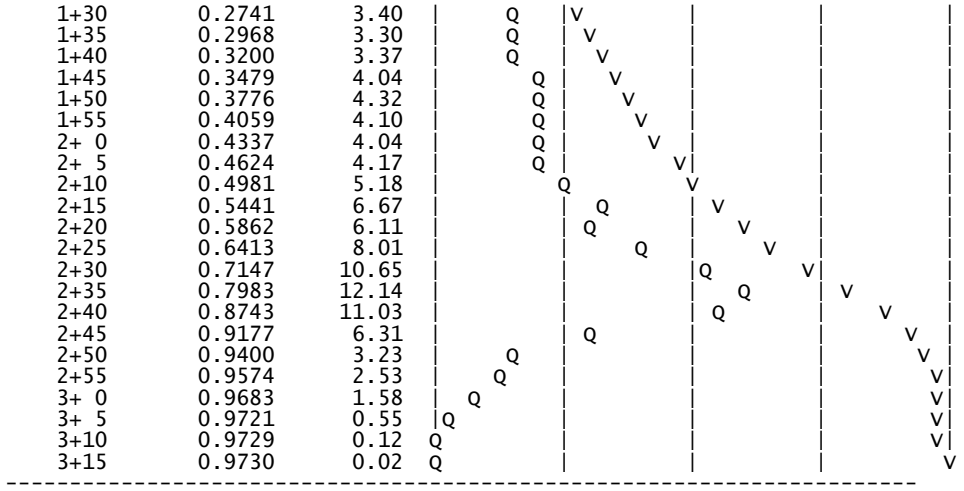
Peak flow rate of this hydrograph = 12.140(CFS)

++

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	5.0	10.0	15.0	20.0
0+ 5	0.0057	0.82	VQ				
0+10	0.0161	1.51	V Q				
0+15	0.0265	1.51	|V Q				
0+20	0.0382	1.70	|V Q				
0+25	0.0513	1.90	| VQ				
0+30	0.0659	2.12	| V Q				
0+35	0.0803	2.10	| VQ				
0+40	0.0952	2.16	| VQ				
0+45	0.1110	2.30	| Q				
0+50	0.1257	2.13	| QV				
0+55	0.1398	2.04	| QV				
1+ 0	0.1549	2.19	| Q V				
1+ 5	0.1725	2.55	| Q V				
1+10	0.1917	2.79	| Q V				
1+15	0.2112	2.83	| Q V				
1+20	0.2299	2.72	| Q V				
1+25	0.2506	3.01	| Q V				



1+30	0.2741	3.40	
1+35	0.2968	3.30	
1+40	0.3200	3.37	
1+45	0.3479	4.04	
1+50	0.3776	4.32	
1+55	0.4059	4.10	
2+ 0	0.4337	4.04	
2+ 5	0.4624	4.17	
2+10	0.4981	5.18	
2+15	0.5441	6.67	
2+20	0.5862	6.11	
2+25	0.6413	8.01	
2+30	0.7147	10.65	
2+35	0.7983	12.14	
2+40	0.8743	11.03	
2+45	0.9177	6.31	
2+50	0.9400	3.23	
2+55	0.9574	2.53	
3+ 0	0.9683	1.58	
3+ 5	0.9721	0.55	
3+10	0.9729	0.12	
3+15	0.9730	0.02	

```
        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  06/06/22 File: PRO1006100.out

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
------------------------------------------------------------------------------

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


Program License Serial Number 5006

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

 English Units used in output format



------------------------------------------------------------------------
------------------------------------------------------------------------
Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.00                 8.03

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           2.50                20.07

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.000(In)
Area Averaged 100-Year Rainfall =    2.500(In)

Point rain (area averaged) =    2.500(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    2.500(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(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   Time % of lag   Distribution   Unit Hydrograph
    (hrs)                          Graph %           (CFS)
------------------------------------------------------------------------
```

1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	(0.143)	0.039	0.111
2	0.17	0.60	0.180	(0.143)	0.047	0.133
3	0.25	0.60	0.180	(0.143)	0.047	0.133
4	0.33	0.60	0.180	(0.143)	0.047	0.133
5	0.42	0.60	0.180	(0.143)	0.047	0.133
6	0.50	0.70	0.210	(0.143)	0.055	0.155
7	0.58	0.70	0.210	(0.143)	0.055	0.155
8	0.67	0.70	0.210	(0.143)	0.055	0.155
9	0.75	0.70	0.210	(0.143)	0.055	0.155
10	0.83	0.70	0.210	(0.143)	0.055	0.155
11	0.92	0.70	0.210	(0.143)	0.055	0.155
12	1.00	0.80	0.240	(0.143)	0.062	0.178
13	1.08	0.80	0.240	(0.143)	0.062	0.178
14	1.17	0.80	0.240	(0.143)	0.062	0.178
15	1.25	0.80	0.240	(0.143)	0.062	0.178
16	1.33	0.80	0.240	(0.143)	0.062	0.178
17	1.42	0.80	0.240	(0.143)	0.062	0.178
18	1.50	0.80	0.240	(0.143)	0.062	0.178
19	1.58	0.80	0.240	(0.143)	0.062	0.178
20	1.67	0.80	0.240	(0.143)	0.062	0.178
21	1.75	0.80	0.240	(0.143)	0.062	0.178
22	1.83	0.80	0.240	(0.143)	0.062	0.178
23	1.92	0.80	0.240	(0.143)	0.062	0.178
24	2.00	0.90	0.270	(0.143)	0.070	0.200
25	2.08	0.80	0.240	(0.143)	0.062	0.178
26	2.17	0.90	0.270	(0.143)	0.070	0.200
27	2.25	0.90	0.270	(0.143)	0.070	0.200
28	2.33	0.90	0.270	(0.143)	0.070	0.200
29	2.42	0.90	0.270	(0.143)	0.070	0.200
30	2.50	0.90	0.270	(0.143)	0.070	0.200
31	2.58	0.90	0.270	(0.143)	0.070	0.200
32	2.67	0.90	0.270	(0.143)	0.070	0.200
33	2.75	1.00	0.300	(0.143)	0.078	0.222
34	2.83	1.00	0.300	(0.143)	0.078	0.222
35	2.92	1.00	0.300	(0.143)	0.078	0.222
36	3.00	1.00	0.300	(0.143)	0.078	0.222
37	3.08	1.00	0.300	(0.143)	0.078	0.222
38	3.17	1.10	0.330	(0.143)	0.086	0.244
39	3.25	1.10	0.330	(0.143)	0.086	0.244
40	3.33	1.10	0.330	(0.143)	0.086	0.244
41	3.42	1.20	0.360	(0.143)	0.094	0.266
42	3.50	1.30	0.390	(0.143)	0.101	0.289
43	3.58	1.40	0.420	(0.143)	0.109	0.311
44	3.67	1.40	0.420	(0.143)	0.109	0.311
45	3.75	1.50	0.450	(0.143)	0.117	0.333
46	3.83	1.50	0.450	(0.143)	0.117	0.333
47	3.92	1.60	0.480	(0.143)	0.125	0.355
48	4.00	1.60	0.480	(0.143)	0.125	0.355
49	4.08	1.70	0.510	(0.143)	0.133	0.377
50	4.17	1.80	0.540	(0.143)	0.140	0.400
51	4.25	1.90	0.570	0.143	(0.148)	0.427
52	4.33	2.00	0.600	0.143	(0.156)	0.457
53	4.42	2.10	0.630	0.143	(0.164)	0.487
54	4.50	2.10	0.630	0.143	(0.164)	0.487
55	4.58	2.20	0.660	0.143	(0.172)	0.517
56	4.67	2.30	0.690	0.143	(0.179)	0.547
57	4.75	2.40	0.720	0.143	(0.187)	0.577
58	4.83	2.40	0.720	0.143	(0.187)	0.577
59	4.92	2.50	0.750	0.143	(0.195)	0.607
60	5.00	2.60	0.780	0.143	(0.203)	0.637
61	5.08	3.10	0.930	0.143	(0.242)	0.787
62	5.17	3.60	1.080	0.143	(0.281)	0.937
63	5.25	3.90	1.170	0.143	(0.304)	1.027
64	5.33	4.20	1.260	0.143	(0.328)	1.117
65	5.42	4.70	1.410	0.143	(0.367)	1.267
66	5.50	5.60	1.680	0.143	(0.437)	1.537
67	5.58	1.90	0.570	0.143	(0.148)	0.427
68	5.67	0.90	0.270	(0.143)	0.070	0.200
69	5.75	0.60	0.180	(0.143)	0.047	0.133
70	5.83	0.50	0.150	(0.143)	0.039	0.111
71	5.92	0.30	0.090	(0.143)	0.023	0.067
72	6.00	0.20	0.060	(0.143)	0.016	0.044
		(Loss Rate Not Used)				
	Sum =	100.0			Sum =	23.6

```
      Flood volume = Effective rainfall      1.97(In)
       times area       8.0(Ac.)/[(In)/(Ft.)] =       1.3(Ac.Ft)
      Total soil loss =      0.53(In)
      Total soil loss =     0.355(Ac.Ft)
      Total rainfall =      2.50(In)
      Flood volume =       57396.3 Cubic Feet
      Total soil loss =       15473.9 Cubic Feet
      ---------------------------------------------------------------------------
       Peak flow rate of this hydrograph =     11.186(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        5.0      10.0      15.0      20.0
---------------------------------------------------------------------------
  0+ 5       0.0030      0.44  Q         |         |         |         |
  0+10       0.0092      0.90  VQ        |         |         |         |
  0+15       0.0163      1.04  V Q       |         |         |         |
  0+20       0.0237      1.07  V Q       |         |         |         |
  0+25       0.0312      1.08  V Q       |         |         |         |
  0+30       0.0392      1.17  |VQ       |         |         |         |
  0+35       0.0477      1.24  |VQ       |         |         |         |
  0+40       0.0564      1.25  |VQ       |         |         |         |
  0+45       0.0650      1.26  |VQ       |         |         |         |
  0+50       0.0737      1.26  | Q       |         |         |         |
  0+55       0.0824      1.26  | Q       |         |         |         |
  1+ 0       0.0916      1.35  | Q       |         |         |         |
  1+ 5       0.1014      1.42  | QV      |         |         |         |
  1+10       0.1113      1.43  | QV      |         |         |         |
  1+15       0.1212      1.44  | QV      |         |         |         |
  1+20       0.1311      1.44  | QV      |         |         |         |
  1+25       0.1410      1.44  | Q V     |         |         |         |
  1+30       0.1509      1.44  | Q V     |         |         |         |
  1+35       0.1608      1.44  | Q V     |         |         |         |
  1+40       0.1707      1.44  | Q  V    |         |         |         |
  1+45       0.1806      1.44  | Q  V    |         |         |         |
  1+50       0.1905      1.44  | Q  V    |         |         |         |
  1+55       0.2004      1.44  | Q   V   |         |         |         |
  2+ 0       0.2109      1.53  |  Q  V   |         |         |         |
  2+ 5       0.2213      1.51  |  Q  V   |         |         |         |
  2+10       0.2319      1.54  |  Q   V  |         |         |         |
  2+15       0.2430      1.60  |  Q   V  |         |         |         |
  2+20       0.2541      1.61  |  Q   V  |         |         |         |
  2+25       0.2652      1.62  |  Q    V |         |         |         |
  2+30       0.2764      1.62  |  Q    V |         |         |         |
  2+35       0.2875      1.62  |  Q    V |         |         |         |
  2+40       0.2987      1.62  |  Q     V|         |         |         |
  2+45       0.3104      1.71  |  Q     V|         |         |         |
  2+50       0.3227      1.78  |  Q     V|         |         |         |
  2+55       0.3350      1.79  |  Q      V         |         |         |
  3+ 0       0.3474      1.80  |  Q      V         |         |         |
  3+ 5       0.3598      1.80  |  Q      V         |         |         |
  3+10       0.3727      1.89  |  Q      |V        |         |         |
  3+15       0.3862      1.96  |  Q      |V        |         |         |
  3+20       0.3998      1.97  |  Q      | V       |         |         |
  3+25       0.4140      2.07  |   Q     | V       |         |         |
  3+30       0.4294      2.23  |   Q     |  V      |         |         |
  3+35       0.4459      2.40  |   Q     |  V      |         |         |
  3+40       0.4631      2.49  |   Q     |   V     |         |         |
  3+45       0.4810      2.60  |    Q    |   V     |         |         |
  3+50       0.4994      2.68  |    Q    |    V    |         |         |
  3+55       0.5186      2.78  |    Q    |    V    |         |         |
  4+ 0       0.5383      2.86  |    Q    |     V   |         |         |
  4+ 5       0.5586      2.96  |    Q    |     V   |         |         |
  4+10       0.5802      3.13  |     Q   |      V  |         |         |
  4+15       0.6030      3.32  |     Q   |       V |         |         |
  4+20       0.6275      3.55  |      Q  |       V|         |         |
  4+25       0.6536      3.79  |      Q  |       V|         |         |
  4+30       0.6805      3.91  |      Q  |        V         |         |
  4+35       0.7084      4.06  |       Q |        |V        |         |
  4+40       0.7379      4.28  |       Q |        | V       |         |
  4+45       0.7690      4.52  |        Q|        |  V      |         |
  4+50       0.8010      4.64  |        Q|        |   V     |         |
  4+55       0.8339      4.78  |        Q|        |    V    |         |
  5+ 0       0.8684      5.01  |         Q        |     V   |         |
  5+ 5       0.9078      5.72  |         |Q       |      V  |         |
  5+10       0.9549      6.84  |         |  Q     |       V |         |
  5+15       1.0086      7.79  |         |    Q   |         V         |
  5+20       1.0675      8.57  |         |      Q |         | V       |
  5+25       1.1333      9.55  |         |        Q         |   V     |
  5+30       1.2103     11.19  |         |         | Q      |     V   |
  5+35       1.2640      7.80  |         |    Q    |        |       V |
  5+40       1.2875      3.41  |     Q   |         |        |        V|
```

```
    5+45       1.2997      1.77  |  Q      |         |         |        v|
    5+50       1.3072      1.09  | Q       |         |         |        v|
    5+55       1.3124      0.76  |Q        |         |         |        v|
    6+ 0       1.3158      0.49  Q         |         |         |        v|
    6+ 5       1.3173      0.21  Q         |         |         |        v|
    6+10       1.3176      0.04  Q         |         |         |        v|
    6+15       1.3176      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  06/06/22 File: PRO10024100.out

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


Program License Serial Number 5006

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

 English Units used in output format



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Drainage Area =       8.03(Ac.)  =      0.013 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment =       8.03(Ac.)  =      0.013 Sq. Mi.
Length along longest watercourse =     987.00(Ft.)
Length along longest watercourse measured to centroid =     494.00(Ft.)
Length along longest watercourse =      0.187 Mi.
Length along longest watercourse measured to centroid =      0.094 Mi.
Difference in elevation =      11.42(Ft.)
Slope along watercourse =     61.0918 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time =    0.035 Hr.
Lag time =     2.13 Min.
25% of lag time =     0.53 Min.
40% of lag time =     0.85 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]
        8.03           1.60                 12.85

100 YEAR Area rainfall data:


Area(Ac.)[1]       Rainfall(In)[2]      Weighting[1*2]
        8.03           4.00                 32.12

STORM EVENT (YEAR) =  100.00
Area Averaged 2-Year Rainfall =    1.600(In)
Area Averaged 100-Year Rainfall =    4.000(In)

Point rain (area averaged) =    4.000(In)
Areal adjustment factor =  100.00 %
Adjusted average point rain =    4.000(In)

Sub-Area Data:
Area(Ac.)         Runoff Index   Impervious %
     8.030           56.00          0.800
 Total Area Entered =      8.03(Ac.)


RI    RI   Infil. Rate Impervious   Adj. Infil. Rate  Area%     F
AMC2 AMC-2     (In/Hr)    (Dec.%)     (In/Hr)      (Dec.)    (In/Hr)
56.0  56.0      0.511     0.800        0.143       1.000      0.143
                                                 Sum (F) =   0.143
Area averaged mean soil loss (F) (In/Hr) =  0.143
Minimum soil loss rate ((In/Hr)) =  0.072
(for 24 hour storm duration)
Soil low loss rate (decimal) =   0.260
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               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)
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1	0.083	235.287	48.903	3.958
2	0.167	470.574	40.984	3.317
3	0.250	705.861	7.511	0.608
4	0.333	941.148	2.602	0.211
			Sum = 100.000 Sum=	8.093

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	0.032	(0.254)	0.008	0.024
2	0.17	0.07	0.032	(0.253)	0.008	0.024
3	0.25	0.07	0.032	(0.252)	0.008	0.024
4	0.33	0.10	0.048	(0.251)	0.012	0.036
5	0.42	0.10	0.048	(0.250)	0.012	0.036
6	0.50	0.10	0.048	(0.249)	0.012	0.036
7	0.58	0.10	0.048	(0.248)	0.012	0.036
8	0.67	0.10	0.048	(0.247)	0.012	0.036
9	0.75	0.10	0.048	(0.246)	0.012	0.036
10	0.83	0.13	0.064	(0.245)	0.017	0.047
11	0.92	0.13	0.064	(0.244)	0.017	0.047
12	1.00	0.13	0.064	(0.243)	0.017	0.047
13	1.08	0.10	0.048	(0.242)	0.012	0.036
14	1.17	0.10	0.048	(0.241)	0.012	0.036
15	1.25	0.10	0.048	(0.240)	0.012	0.036
16	1.33	0.10	0.048	(0.239)	0.012	0.036
17	1.42	0.10	0.048	(0.238)	0.012	0.036
18	1.50	0.10	0.048	(0.237)	0.012	0.036
19	1.58	0.10	0.048	(0.236)	0.012	0.036
20	1.67	0.10	0.048	(0.235)	0.012	0.036
21	1.75	0.10	0.048	(0.234)	0.012	0.036
22	1.83	0.13	0.064	(0.233)	0.017	0.047
23	1.92	0.13	0.064	(0.232)	0.017	0.047
24	2.00	0.13	0.064	(0.231)	0.017	0.047
25	2.08	0.13	0.064	(0.231)	0.017	0.047
26	2.17	0.13	0.064	(0.230)	0.017	0.047
27	2.25	0.13	0.064	(0.229)	0.017	0.047
28	2.33	0.13	0.064	(0.228)	0.017	0.047
29	2.42	0.13	0.064	(0.227)	0.017	0.047
30	2.50	0.13	0.064	(0.226)	0.017	0.047
31	2.58	0.17	0.080	(0.225)	0.021	0.059
32	2.67	0.17	0.080	(0.224)	0.021	0.059
33	2.75	0.17	0.080	(0.223)	0.021	0.059
34	2.83	0.17	0.080	(0.222)	0.021	0.059
35	2.92	0.17	0.080	(0.221)	0.021	0.059
36	3.00	0.17	0.080	(0.220)	0.021	0.059
37	3.08	0.17	0.080	(0.219)	0.021	0.059
38	3.17	0.17	0.080	(0.219)	0.021	0.059
39	3.25	0.17	0.080	(0.218)	0.021	0.059
40	3.33	0.17	0.080	(0.217)	0.021	0.059
41	3.42	0.17	0.080	(0.216)	0.021	0.059
42	3.50	0.17	0.080	(0.215)	0.021	0.059
43	3.58	0.17	0.080	(0.214)	0.021	0.059
44	3.67	0.17	0.080	(0.213)	0.021	0.059
45	3.75	0.17	0.080	(0.212)	0.021	0.059
46	3.83	0.20	0.096	(0.211)	0.025	0.071
47	3.92	0.20	0.096	(0.210)	0.025	0.071
48	4.00	0.20	0.096	(0.210)	0.025	0.071
49	4.08	0.20	0.096	(0.209)	0.025	0.071
50	4.17	0.20	0.096	(0.208)	0.025	0.071
51	4.25	0.20	0.096	(0.207)	0.025	0.071
52	4.33	0.23	0.112	(0.206)	0.029	0.083
53	4.42	0.23	0.112	(0.205)	0.029	0.083
54	4.50	0.23	0.112	(0.204)	0.029	0.083
55	4.58	0.23	0.112	(0.203)	0.029	0.083
56	4.67	0.23	0.112	(0.202)	0.029	0.083
57	4.75	0.23	0.112	(0.202)	0.029	0.083
58	4.83	0.27	0.128	(0.201)	0.033	0.095
59	4.92	0.27	0.128	(0.200)	0.033	0.095
60	5.00	0.27	0.128	(0.199)	0.033	0.095
61	5.08	0.20	0.096	(0.198)	0.025	0.071
62	5.17	0.20	0.096	(0.197)	0.025	0.071
63	5.25	0.20	0.096	(0.196)	0.025	0.071
64	5.33	0.23	0.112	(0.196)	0.029	0.083
65	5.42	0.23	0.112	(0.195)	0.029	0.083
66	5.50	0.23	0.112	(0.194)	0.029	0.083
67	5.58	0.27	0.128	(0.193)	0.033	0.095
68	5.67	0.27	0.128	(0.192)	0.033	0.095
69	5.75	0.27	0.128	(0.191)	0.033	0.095
70	5.83	0.27	0.128	(0.190)	0.033	0.095
71	5.92	0.27	0.128	(0.190)	0.033	0.095
72	6.00	0.27	0.128	(0.189)	0.033	0.095
73	6.08	0.30	0.144	(0.188)	0.037	0.107
74	6.17	0.30	0.144	(0.187)	0.037	0.107

75	6.25	0.30	0.144	(0.186)	0.037	0.107
76	6.33	0.30	0.144	(0.185)	0.037	0.107
77	6.42	0.30	0.144	(0.185)	0.037	0.107
78	6.50	0.30	0.144	(0.184)	0.037	0.107
79	6.58	0.33	0.160	(0.183)	0.042	0.118
80	6.67	0.33	0.160	(0.182)	0.042	0.118
81	6.75	0.33	0.160	(0.181)	0.042	0.118
82	6.83	0.33	0.160	(0.181)	0.042	0.118
83	6.92	0.33	0.160	(0.180)	0.042	0.118
84	7.00	0.33	0.160	(0.179)	0.042	0.118
85	7.08	0.33	0.160	(0.178)	0.042	0.118
86	7.17	0.33	0.160	(0.177)	0.042	0.118
87	7.25	0.33	0.160	(0.176)	0.042	0.118
88	7.33	0.37	0.176	(0.176)	0.046	0.130
89	7.42	0.37	0.176	(0.175)	0.046	0.130
90	7.50	0.37	0.176	(0.174)	0.046	0.130
91	7.58	0.40	0.192	(0.173)	0.050	0.142
92	7.67	0.40	0.192	(0.172)	0.050	0.142
93	7.75	0.40	0.192	(0.172)	0.050	0.142
94	7.83	0.43	0.208	(0.171)	0.054	0.154
95	7.92	0.43	0.208	(0.170)	0.054	0.154
96	8.00	0.43	0.208	(0.169)	0.054	0.154
97	8.08	0.50	0.240	(0.168)	0.062	0.178
98	8.17	0.50	0.240	(0.168)	0.062	0.178
99	8.25	0.50	0.240	(0.167)	0.062	0.178
100	8.33	0.50	0.240	(0.166)	0.062	0.178
101	8.42	0.50	0.240	(0.165)	0.062	0.178
102	8.50	0.50	0.240	(0.165)	0.062	0.178
103	8.58	0.53	0.256	(0.164)	0.067	0.189
104	8.67	0.53	0.256	(0.163)	0.067	0.189
105	8.75	0.53	0.256	(0.162)	0.067	0.189
106	8.83	0.57	0.272	(0.162)	0.071	0.201
107	8.92	0.57	0.272	(0.161)	0.071	0.201
108	9.00	0.57	0.272	(0.160)	0.071	0.201
109	9.08	0.63	0.304	(0.159)	0.079	0.225
110	9.17	0.63	0.304	(0.158)	0.079	0.225
111	9.25	0.63	0.304	(0.158)	0.079	0.225
112	9.33	0.67	0.320	(0.157)	0.083	0.237
113	9.42	0.67	0.320	(0.156)	0.083	0.237
114	9.50	0.67	0.320	(0.155)	0.083	0.237
115	9.58	0.70	0.336	(0.155)	0.087	0.249
116	9.67	0.70	0.336	(0.154)	0.087	0.249
117	9.75	0.70	0.336	(0.153)	0.087	0.249
118	9.83	0.73	0.352	(0.153)	0.092	0.260
119	9.92	0.73	0.352	(0.152)	0.092	0.260
120	10.00	0.73	0.352	(0.151)	0.092	0.260
121	10.08	0.50	0.240	(0.150)	0.062	0.178
122	10.17	0.50	0.240	(0.150)	0.062	0.178
123	10.25	0.50	0.240	(0.149)	0.062	0.178
124	10.33	0.50	0.240	(0.148)	0.062	0.178
125	10.42	0.50	0.240	(0.147)	0.062	0.178
126	10.50	0.50	0.240	(0.147)	0.062	0.178
127	10.58	0.67	0.320	(0.146)	0.083	0.237
128	10.67	0.67	0.320	(0.145)	0.083	0.237
129	10.75	0.67	0.320	(0.145)	0.083	0.237
130	10.83	0.67	0.320	(0.144)	0.083	0.237
131	10.92	0.67	0.320	(0.143)	0.083	0.237
132	11.00	0.67	0.320	(0.142)	0.083	0.237
133	11.08	0.63	0.304	(0.142)	0.079	0.225
134	11.17	0.63	0.304	(0.141)	0.079	0.225
135	11.25	0.63	0.304	(0.140)	0.079	0.225
136	11.33	0.63	0.304	(0.140)	0.079	0.225
137	11.42	0.63	0.304	(0.139)	0.079	0.225
138	11.50	0.63	0.304	(0.138)	0.079	0.225
139	11.58	0.57	0.272	(0.138)	0.071	0.201
140	11.67	0.57	0.272	(0.137)	0.071	0.201
141	11.75	0.57	0.272	(0.136)	0.071	0.201
142	11.83	0.60	0.288	(0.136)	0.075	0.213
143	11.92	0.60	0.288	(0.135)	0.075	0.213
144	12.00	0.60	0.288	(0.134)	0.075	0.213
145	12.08	0.83	0.400	(0.134)	0.104	0.296
146	12.17	0.83	0.400	(0.133)	0.104	0.296
147	12.25	0.83	0.400	(0.132)	0.104	0.296
148	12.33	0.87	0.416	(0.132)	0.108	0.308
149	12.42	0.87	0.416	(0.131)	0.108	0.308
150	12.50	0.87	0.416	(0.130)	0.108	0.308
151	12.58	0.93	0.448	(0.130)	0.116	0.332
152	12.67	0.93	0.448	(0.129)	0.116	0.332
153	12.75	0.93	0.448	(0.128)	0.116	0.332
154	12.83	0.97	0.464	(0.128)	0.121	0.343
155	12.92	0.97	0.464	(0.127)	0.121	0.343
156	13.00	0.97	0.464	(0.126)	0.121	0.343
157	13.08	1.13	0.544	0.126	(0.141)	0.418
158	13.17	1.13	0.544	0.125	(0.141)	0.419
159	13.25	1.13	0.544	0.124	(0.141)	0.420
160	13.33	1.13	0.544	0.124	(0.141)	0.420
161	13.42	1.13	0.544	0.123	(0.141)	0.421

162	13.50	1.13	0.544	0.123	(0.141)	0.421
163	13.58	0.77	0.368	(0.122)	0.096	0.272
164	13.67	0.77	0.368	(0.121)	0.096	0.272
165	13.75	0.77	0.368	(0.121)	0.096	0.272
166	13.83	0.77	0.368	(0.120)	0.096	0.272
167	13.92	0.77	0.368	(0.119)	0.096	0.272
168	14.00	0.77	0.368	(0.119)	0.096	0.272
169	14.08	0.90	0.432	(0.118)	0.112	0.320
170	14.17	0.90	0.432	(0.118)	0.112	0.320
171	14.25	0.90	0.432	(0.117)	0.112	0.320
172	14.33	0.87	0.416	(0.116)	0.108	0.308
173	14.42	0.87	0.416	(0.116)	0.108	0.308
174	14.50	0.87	0.416	(0.115)	0.108	0.308
175	14.58	0.87	0.416	(0.115)	0.108	0.308
176	14.67	0.87	0.416	(0.114)	0.108	0.308
177	14.75	0.87	0.416	(0.113)	0.108	0.308
178	14.83	0.83	0.400	(0.113)	0.104	0.296
179	14.92	0.83	0.400	(0.112)	0.104	0.296
180	15.00	0.83	0.400	(0.112)	0.104	0.296
181	15.08	0.80	0.384	(0.111)	0.100	0.284
182	15.17	0.80	0.384	(0.111)	0.100	0.284
183	15.25	0.80	0.384	(0.110)	0.100	0.284
184	15.33	0.77	0.368	(0.109)	0.096	0.272
185	15.42	0.77	0.368	(0.109)	0.096	0.272
186	15.50	0.77	0.368	(0.108)	0.096	0.272
187	15.58	0.63	0.304	(0.108)	0.079	0.225
188	15.67	0.63	0.304	(0.107)	0.079	0.225
189	15.75	0.63	0.304	(0.107)	0.079	0.225
190	15.83	0.63	0.304	(0.106)	0.079	0.225
191	15.92	0.63	0.304	(0.106)	0.079	0.225
192	16.00	0.63	0.304	(0.105)	0.079	0.225
193	16.08	0.13	0.064	(0.104)	0.017	0.047
194	16.17	0.13	0.064	(0.104)	0.017	0.047
195	16.25	0.13	0.064	(0.103)	0.017	0.047
196	16.33	0.13	0.064	(0.103)	0.017	0.047
197	16.42	0.13	0.064	(0.102)	0.017	0.047
198	16.50	0.13	0.064	(0.102)	0.017	0.047
199	16.58	0.10	0.048	(0.101)	0.012	0.036
200	16.67	0.10	0.048	(0.101)	0.012	0.036
201	16.75	0.10	0.048	(0.100)	0.012	0.036
202	16.83	0.10	0.048	(0.100)	0.012	0.036
203	16.92	0.10	0.048	(0.099)	0.012	0.036
204	17.00	0.10	0.048	(0.099)	0.012	0.036
205	17.08	0.17	0.080	(0.098)	0.021	0.059
206	17.17	0.17	0.080	(0.098)	0.021	0.059
207	17.25	0.17	0.080	(0.097)	0.021	0.059
208	17.33	0.17	0.080	(0.097)	0.021	0.059
209	17.42	0.17	0.080	(0.096)	0.021	0.059
210	17.50	0.17	0.080	(0.096)	0.021	0.059
211	17.58	0.17	0.080	(0.095)	0.021	0.059
212	17.67	0.17	0.080	(0.095)	0.021	0.059
213	17.75	0.17	0.080	(0.094)	0.021	0.059
214	17.83	0.13	0.064	(0.094)	0.017	0.047
215	17.92	0.13	0.064	(0.093)	0.017	0.047
216	18.00	0.13	0.064	(0.093)	0.017	0.047
217	18.08	0.13	0.064	(0.093)	0.017	0.047
218	18.17	0.13	0.064	(0.092)	0.017	0.047
219	18.25	0.13	0.064	(0.092)	0.017	0.047
220	18.33	0.13	0.064	(0.091)	0.017	0.047
221	18.42	0.13	0.064	(0.091)	0.017	0.047
222	18.50	0.13	0.064	(0.090)	0.017	0.047
223	18.58	0.10	0.048	(0.090)	0.012	0.036
224	18.67	0.10	0.048	(0.089)	0.012	0.036
225	18.75	0.10	0.048	(0.089)	0.012	0.036
226	18.83	0.07	0.032	(0.089)	0.008	0.024
227	18.92	0.07	0.032	(0.088)	0.008	0.024
228	19.00	0.07	0.032	(0.088)	0.008	0.024
229	19.08	0.10	0.048	(0.087)	0.012	0.036
230	19.17	0.10	0.048	(0.087)	0.012	0.036
231	19.25	0.10	0.048	(0.087)	0.012	0.036
232	19.33	0.13	0.064	(0.086)	0.017	0.047
233	19.42	0.13	0.064	(0.086)	0.017	0.047
234	19.50	0.13	0.064	(0.085)	0.017	0.047
235	19.58	0.10	0.048	(0.085)	0.012	0.036
236	19.67	0.10	0.048	(0.085)	0.012	0.036
237	19.75	0.10	0.048	(0.084)	0.012	0.036
238	19.83	0.07	0.032	(0.084)	0.008	0.024
239	19.92	0.07	0.032	(0.083)	0.008	0.024
240	20.00	0.07	0.032	(0.083)	0.008	0.024
241	20.08	0.10	0.048	(0.083)	0.012	0.036
242	20.17	0.10	0.048	(0.082)	0.012	0.036
243	20.25	0.10	0.048	(0.082)	0.012	0.036
244	20.33	0.10	0.048	(0.082)	0.012	0.036
245	20.42	0.10	0.048	(0.081)	0.012	0.036
246	20.50	0.10	0.048	(0.081)	0.012	0.036
247	20.58	0.10	0.048	(0.081)	0.012	0.036
248	20.67	0.10	0.048	(0.080)	0.012	0.036

249	20.75	0.10	0.048	(	0.080)	0.012	0.036
250	20.83	0.07	0.032	(	0.080)	0.008	0.024
251	20.92	0.07	0.032	(	0.079)	0.008	0.024
252	21.00	0.07	0.032	(	0.079)	0.008	0.024
253	21.08	0.10	0.048	(	0.079)	0.012	0.036
254	21.17	0.10	0.048	(	0.078)	0.012	0.036
255	21.25	0.10	0.048	(	0.078)	0.012	0.036
256	21.33	0.07	0.032	(	0.078)	0.008	0.024
257	21.42	0.07	0.032	(	0.077)	0.008	0.024
258	21.50	0.07	0.032	(	0.077)	0.008	0.024
259	21.58	0.10	0.048	(	0.077)	0.012	0.036
260	21.67	0.10	0.048	(	0.077)	0.012	0.036
261	21.75	0.10	0.048	(	0.076)	0.012	0.036
262	21.83	0.07	0.032	(	0.076)	0.008	0.024
263	21.92	0.07	0.032	(	0.076)	0.008	0.024
264	22.00	0.07	0.032	(	0.076)	0.008	0.024
265	22.08	0.10	0.048	(	0.075)	0.012	0.036
266	22.17	0.10	0.048	(	0.075)	0.012	0.036
267	22.25	0.10	0.048	(	0.075)	0.012	0.036
268	22.33	0.07	0.032	(	0.075)	0.008	0.024
269	22.42	0.07	0.032	(	0.074)	0.008	0.024
270	22.50	0.07	0.032	(	0.074)	0.008	0.024
271	22.58	0.07	0.032	(	0.074)	0.008	0.024
272	22.67	0.07	0.032	(	0.074)	0.008	0.024
273	22.75	0.07	0.032	(	0.073)	0.008	0.024
274	22.83	0.07	0.032	(	0.073)	0.008	0.024
275	22.92	0.07	0.032	(	0.073)	0.008	0.024
276	23.00	0.07	0.032	(	0.073)	0.008	0.024
277	23.08	0.07	0.032	(	0.073)	0.008	0.024
278	23.17	0.07	0.032	(	0.073)	0.008	0.024
279	23.25	0.07	0.032	(	0.072)	0.008	0.024
280	23.33	0.07	0.032	(	0.072)	0.008	0.024
281	23.42	0.07	0.032	(	0.072)	0.008	0.024
282	23.50	0.07	0.032	(	0.072)	0.008	0.024
283	23.58	0.07	0.032	(	0.072)	0.008	0.024
284	23.67	0.07	0.032	(	0.072)	0.008	0.024
285	23.75	0.07	0.032	(	0.072)	0.008	0.024
286	23.83	0.07	0.032	(	0.072)	0.008	0.024
287	23.92	0.07	0.032	(	0.072)	0.008	0.024
288	24.00	0.07	0.032	(	0.072)	0.008	0.024

(Loss Rate Not Used)

Sum = 100.0 Sum = 35.6

Flood volume = Effective rainfall 2.97(In)
times area 8.0(Ac.)/[(In)/(Ft.)] = 2.0(Ac.Ft)
Total soil loss = 1.03(In)
Total soil loss = 0.690(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 86532.4 Cubic Feet
Total soil loss = 30061.4 Cubic Feet

Peak flow rate of this hydrograph = 3.410(CFS)

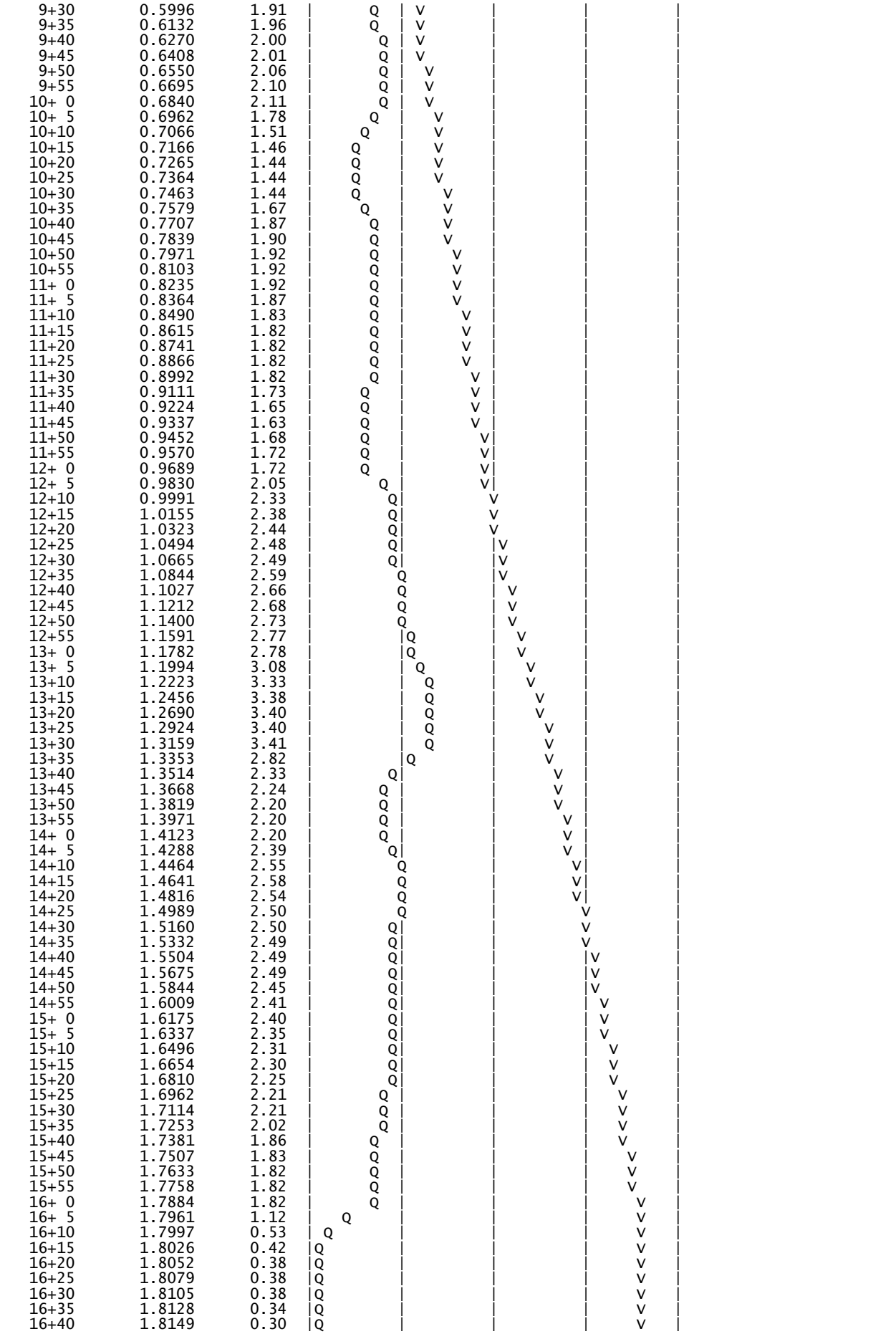
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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

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	0.0006	0.09	Q				
0+10	0.0018	0.17	Q				
0+15	0.0031	0.19	Q				
0+20	0.0048	0.24	Q				
0+25	0.0067	0.28	VQ				
0+30	0.0086	0.29	VQ				
0+35	0.0106	0.29	VQ				
0+40	0.0126	0.29	VQ				
0+45	0.0146	0.29	VQ				
0+50	0.0169	0.33	VQ				
0+55	0.0195	0.37	VQ				
1+ 0	0.0221	0.38	VQ				
1+ 5	0.0244	0.34	VQ				
1+10	0.0264	0.30	VQ				
1+15	0.0284	0.29	VQ				
1+20	0.0304	0.29	VQ				
1+25	0.0324	0.29	VQ				
1+30	0.0344	0.29	VQ				
1+35	0.0364	0.29	VQ				
1+40	0.0384	0.29	VQ				
1+45	0.0403	0.29	VQ				
1+50	0.0426	0.33	VQ				
1+55	0.0452	0.37	VQ				
2+ 0	0.0478	0.38	VQ				
2+ 5	0.0505	0.38	|Q				
2+10	0.0531	0.38	|Q				

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2+15       0.0558      0.38  |Q         |          |          |          |
2+20       0.0584      0.38  |Q         |          |          |          |
2+25       0.0610      0.38  |Q         |          |          |          |
2+30       0.0637      0.38  |Q         |          |          |          |
2+35       0.0666      0.43  |Q         |          |          |          |
2+40       0.0699      0.47  |Q         |          |          |          |
2+45       0.0732      0.48  |Q         |          |          |          |
2+50       0.0765      0.48  |Q         |          |          |          |
2+55       0.0798      0.48  |Q         |          |          |          |
3+ 0       0.0831      0.48  |Q         |          |          |          |
3+ 5       0.0864      0.48  |Q         |          |          |          |
3+10       0.0897      0.48  |Q         |          |          |          |
3+15       0.0930      0.48  |Q         |          |          |          |
3+20       0.0963      0.48  |Q         |          |          |          |
3+25       0.0996      0.48  |QV        |          |          |          |
3+30       0.1029      0.48  |QV        |          |          |          |
3+35       0.1062      0.48  |QV        |          |          |          |
3+40       0.1095      0.48  |QV        |          |          |          |
3+45       0.1128      0.48  |QV        |          |          |          |
3+50       0.1164      0.53  | Q        |          |          |          |
3+55       0.1203      0.57  | Q        |          |          |          |
4+ 0       0.1242      0.57  | Q        |          |          |          |
4+ 5       0.1282      0.58  | Q        |          |          |          |
4+10       0.1322      0.58  | Q        |          |          |          |
4+15       0.1361      0.58  | Q        |          |          |          |
4+20       0.1404      0.62  | Q        |          |          |          |
4+25       0.1450      0.66  | Q        |          |          |          |
4+30       0.1496      0.67  | QV       |          |          |          |
4+35       0.1542      0.67  | QV       |          |          |          |
4+40       0.1588      0.67  | QV       |          |          |          |
4+45       0.1634      0.67  | QV       |          |          |          |
4+50       0.1684      0.72  | QV       |          |          |          |
4+55       0.1736      0.76  |  Q       |          |          |          |
5+ 0       0.1789      0.76  |  Q       |          |          |          |
5+ 5       0.1835      0.67  | QV       |          |          |          |
5+10       0.1876      0.59  | QV       |          |          |          |
5+15       0.1916      0.58  | QV       |          |          |          |
5+20       0.1959      0.62  | QV       |          |          |          |
5+25       0.2004      0.66  | Q V      |          |          |          |
5+30       0.2050      0.67  | Q V      |          |          |          |
5+35       0.2100      0.72  | Q V      |          |          |          |
5+40       0.2152      0.76  |  QV      |          |          |          |
5+45       0.2204      0.76  |  QV      |          |          |          |
5+50       0.2257      0.77  |  QV      |          |          |          |
5+55       0.2310      0.77  |  QV      |          |          |          |
6+ 0       0.2363      0.77  |  QV      |          |          |          |
6+ 5       0.2419      0.81  |  QV      |          |          |          |
6+10       0.2478      0.85  |  QV      |          |          |          |
6+15       0.2537      0.86  |  Q V     |          |          |          |
6+20       0.2596      0.86  |  Q V     |          |          |          |
6+25       0.2656      0.86  |  Q V     |          |          |          |
6+30       0.2715      0.86  |  Q V     |          |          |          |
6+35       0.2778      0.91  |  Q V     |          |          |          |
6+40       0.2843      0.95  |  Q V     |          |          |          |
6+45       0.2909      0.96  |  Q V     |          |          |          |
6+50       0.2975      0.96  |  Q V     |          |          |          |
6+55       0.3041      0.96  |  Q  V    |          |          |          |
7+ 0       0.3107      0.96  |  Q  V    |          |          |          |
7+ 5       0.3173      0.96  |  Q  V    |          |          |          |
7+10       0.3239      0.96  |  Q  V    |          |          |          |
7+15       0.3305      0.96  |  Q  V    |          |          |          |
7+20       0.3375      1.01  |   Q V    |          |          |          |
7+25       0.3446      1.04  |   Q V    |          |          |          |
7+30       0.3519      1.05  |   Q  V   |          |          |          |
7+35       0.3595      1.10  |   Q  V   |          |          |          |
7+40       0.3673      1.14  |   Q  V   |          |          |          |
7+45       0.3752      1.15  |   Q  V   |          |          |          |
7+50       0.3835      1.20  |   Q  V   |          |          |          |
7+55       0.3920      1.24  |   Q  V   |          |          |          |
8+ 0       0.4006      1.24  |   Q   V  |          |          |          |
8+ 5       0.4098      1.34  |    Q  V  |          |          |          |
8+10       0.4196      1.42  |    Q  V  |          |          |          |
8+15       0.4294      1.43  |    Q  V  |          |          |          |
8+20       0.4393      1.44  |    Q  V  |          |          |          |
8+25       0.4492      1.44  |    Q   V |          |          |          |
8+30       0.4591      1.44  |    Q   V |          |          |          |
8+35       0.4694      1.48  |    Q   V |          |          |          |
8+40       0.4799      1.52  |     Q  V |          |          |          |
8+45       0.4904      1.53  |     Q  V |          |          |          |
8+50       0.5013      1.58  |     Q   V|          |          |          |
8+55       0.5125      1.62  |     Q   V|          |          |          |
9+ 0       0.5237      1.63  |     Q   V|          |          |          |
9+ 5       0.5355      1.72  |     Q   V|          |          |          |
9+10       0.5479      1.80  |      Q  |V          |          |          |
9+15       0.5605      1.82  |      Q  |V          |          |          |
9+20       0.5733      1.87  |      Q  |V          |          |          |
9+25       0.5865      1.91  |      Q  |V          |          |          |
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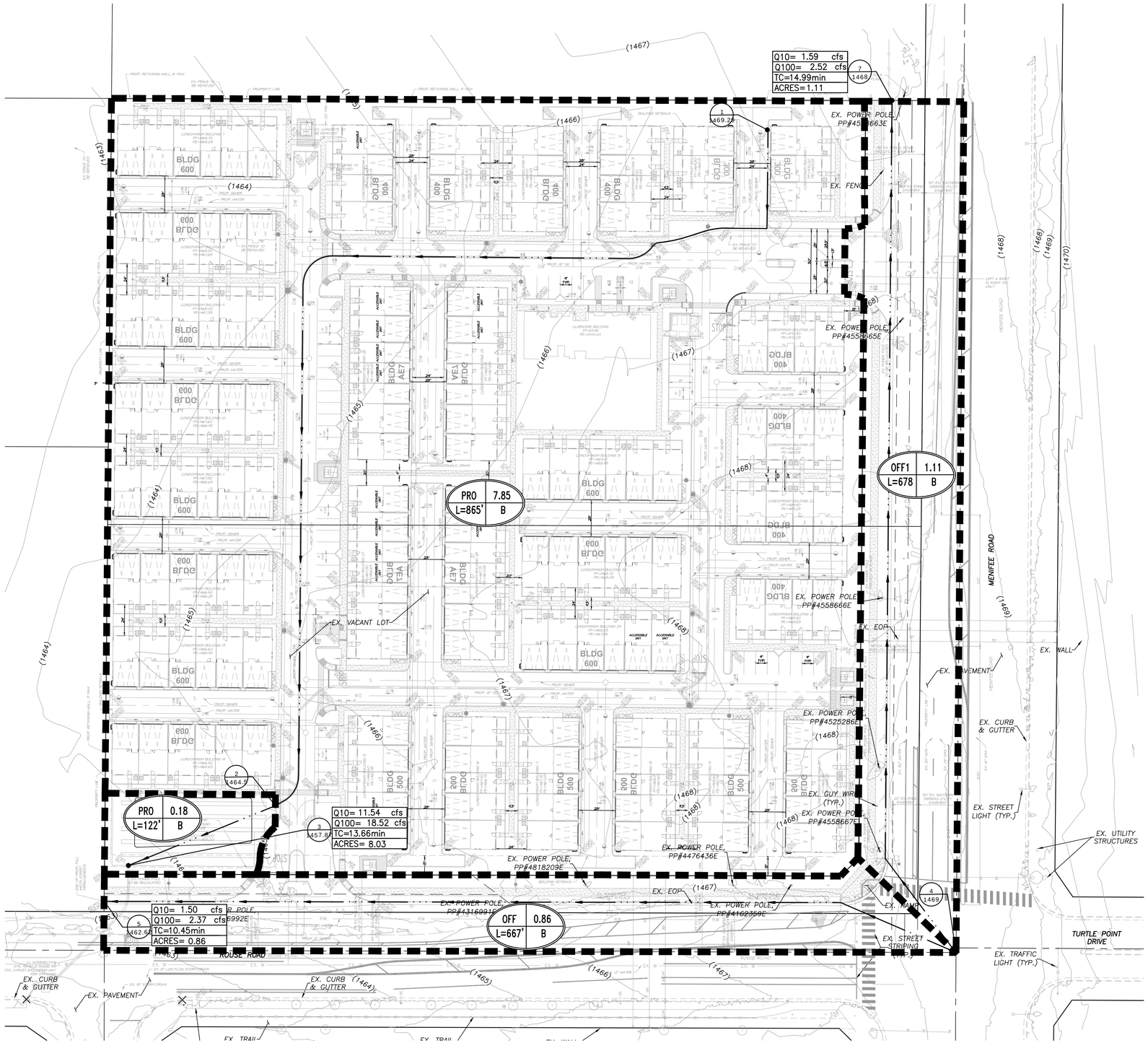


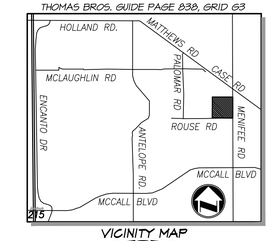
9+30	0.5996	1.91	
9+35	0.6132	1.96	
9+40	0.6270	2.00	
9+45	0.6408	2.01	
9+50	0.6550	2.06	
9+55	0.6695	2.10	
10+ 0	0.6840	2.11	
10+ 5	0.6962	1.78	
10+10	0.7066	1.51	
10+15	0.7166	1.46	
10+20	0.7265	1.44	
10+25	0.7364	1.44	
10+30	0.7463	1.44	
10+35	0.7579	1.67	
10+40	0.7707	1.87	
10+45	0.7839	1.90	
10+50	0.7971	1.92	
10+55	0.8103	1.92	
11+ 0	0.8235	1.92	
11+ 5	0.8364	1.87	
11+10	0.8490	1.83	
11+15	0.8615	1.82	
11+20	0.8741	1.82	
11+25	0.8866	1.82	
11+30	0.8992	1.82	
11+35	0.9111	1.73	
11+40	0.9224	1.65	
11+45	0.9337	1.63	
11+50	0.9452	1.68	
11+55	0.9570	1.72	
12+ 0	0.9689	1.72	
12+ 5	0.9830	2.05	
12+10	0.9991	2.33	
12+15	1.0155	2.38	
12+20	1.0323	2.44	
12+25	1.0494	2.48	
12+30	1.0665	2.49	
12+35	1.0844	2.59	
12+40	1.1027	2.66	
12+45	1.1212	2.68	
12+50	1.1400	2.73	
12+55	1.1591	2.77	
13+ 0	1.1782	2.78	
13+ 5	1.1994	3.08	
13+10	1.2223	3.33	
13+15	1.2456	3.38	
13+20	1.2690	3.40	
13+25	1.2924	3.40	
13+30	1.3159	3.41	
13+35	1.3353	2.82	
13+40	1.3514	2.33	
13+45	1.3668	2.24	
13+50	1.3819	2.20	
13+55	1.3971	2.20	
14+ 0	1.4123	2.20	
14+ 5	1.4288	2.39	
14+10	1.4464	2.55	
14+15	1.4641	2.58	
14+20	1.4816	2.54	
14+25	1.4989	2.50	
14+30	1.5160	2.50	
14+35	1.5332	2.49	
14+40	1.5504	2.49	
14+45	1.5675	2.49	
14+50	1.5844	2.45	
14+55	1.6009	2.41	
15+ 0	1.6175	2.40	
15+ 5	1.6337	2.35	
15+10	1.6496	2.31	
15+15	1.6654	2.30	
15+20	1.6810	2.25	
15+25	1.6962	2.21	
15+30	1.7114	2.21	
15+35	1.7253	2.02	
15+40	1.7381	1.86	
15+45	1.7507	1.83	
15+50	1.7633	1.82	
15+55	1.7758	1.82	
16+ 0	1.7884	1.82	
16+ 5	1.7961	1.12	
16+10	1.7997	0.53	
16+15	1.8026	0.42	
16+20	1.8052	0.38	
16+25	1.8079	0.38	
16+30	1.8105	0.38	
16+35	1.8128	0.34	
16+40	1.8149	0.30	

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16+45       1.8169      0.29  |Q        |         |         |     V   |
16+50       1.8189      0.29  |Q        |         |         |     V   |
16+55       1.8208      0.29  |Q        |         |         |     V   |
17+ 0       1.8228      0.29  |Q        |         |         |     V   |
17+ 5       1.8255      0.38  |Q        |         |         |     V   |
17+10       1.8286      0.46  |Q        |         |         |     V   |
17+15       1.8319      0.47  |Q        |         |         |     V   |
17+20       1.8352      0.48  |Q        |         |         |     V   |
17+25       1.8385      0.48  |Q        |         |         |      V  |
17+30       1.8418      0.48  |Q        |         |         |      V  |
17+35       1.8451      0.48  |Q        |         |         |      V  |
17+40       1.8484      0.48  |Q        |         |         |      V  |
17+45       1.8517      0.48  |Q        |         |         |      V  |
17+50       1.8547      0.43  |Q        |         |         |      V  |
17+55       1.8574      0.39  |Q        |         |         |      V  |
18+ 0       1.8600      0.39  |Q        |         |         |      V  |
18+ 5       1.8627      0.38  |Q        |         |         |      V  |
18+10       1.8653      0.38  |Q        |         |         |      V  |
18+15       1.8680      0.38  |Q        |         |         |      V  |
18+20       1.8706      0.38  |Q        |         |         |      V  |
18+25       1.8732      0.38  |Q        |         |         |      V  |
18+30       1.8759      0.38  |Q        |         |         |      V  |
18+35       1.8782      0.34  |Q        |         |         |      V  |
18+40       1.8803      0.30  |Q        |         |         |      V  |
18+45       1.8823      0.29  |Q        |         |         |      V  |
18+50       1.8839      0.24  Q         |         |         |      V  |
18+55       1.8853      0.20  Q         |         |         |      V  |
19+ 0       1.8866      0.19  Q         |         |         |      V  |
19+ 5       1.8883      0.24  Q         |         |         |       V |
19+10       1.8902      0.28  |Q        |         |         |       V |
19+15       1.8922      0.29  |Q        |         |         |       V |
19+20       1.8945      0.33  |Q        |         |         |       V |
19+25       1.8970      0.37  |Q        |         |         |       V |
19+30       1.8997      0.38  |Q        |         |         |       V |
19+35       1.9020      0.34  |Q        |         |         |       V |
19+40       1.9040      0.30  |Q        |         |         |       V |
19+45       1.9060      0.29  |Q        |         |         |       V |
19+50       1.9077      0.24  Q         |         |         |       V |
19+55       1.9091      0.20  Q         |         |         |       V |
20+ 0       1.9104      0.19  Q         |         |         |       V |
20+ 5       1.9120      0.24  Q         |         |         |       V |
20+10       1.9140      0.28  |Q        |         |         |       V |
20+15       1.9159      0.29  |Q        |         |         |       V |
20+20       1.9179      0.29  |Q        |         |         |       V |
20+25       1.9199      0.29  |Q        |         |         |       V |
20+30       1.9219      0.29  |Q        |         |         |       V |
20+35       1.9238      0.29  |Q        |         |         |       V |
20+40       1.9258      0.29  |Q        |         |         |       V |
20+45       1.9278      0.29  |Q        |         |         |       V |
20+50       1.9295      0.24  Q         |         |         |       V |
20+55       1.9309      0.20  Q         |         |         |       V |
21+ 0       1.9322      0.19  Q         |         |         |       V |
21+ 5       1.9338      0.24  Q         |         |         |       V |
21+10       1.9357      0.28  |Q        |         |         |       V |
21+15       1.9377      0.29  |Q        |         |         |        V|
21+20       1.9394      0.24  Q         |         |         |        V|
21+25       1.9408      0.20  Q         |         |         |        V|
21+30       1.9421      0.19  Q         |         |         |        V|
21+35       1.9437      0.24  Q         |         |         |        V|
21+40       1.9456      0.28  |Q        |         |         |        V|
21+45       1.9476      0.29  |Q        |         |         |        V|
21+50       1.9493      0.24  Q         |         |         |        V|
21+55       1.9507      0.20  Q         |         |         |        V|
22+ 0       1.9520      0.19  Q         |         |         |        V|
22+ 5       1.9536      0.24  Q         |         |         |        V|
22+10       1.9556      0.28  |Q        |         |         |        V|
22+15       1.9575      0.29  |Q        |         |         |        V|
22+20       1.9592      0.24  Q         |         |         |        V|
22+25       1.9606      0.20  Q         |         |         |        V|
22+30       1.9619      0.19  Q         |         |         |        V|
22+35       1.9632      0.19  Q         |         |         |        V|
22+40       1.9645      0.19  Q         |         |         |        V|
22+45       1.9659      0.19  Q         |         |         |        V|
22+50       1.9672      0.19  Q         |         |         |        V|
22+55       1.9685      0.19  Q         |         |         |        V|
23+ 0       1.9698      0.19  Q         |         |         |        V|
23+ 5       1.9711      0.19  Q         |         |         |        V|
23+10       1.9725      0.19  Q         |         |         |        V|
23+15       1.9738      0.19  Q         |         |         |        V|
23+20       1.9751      0.19  Q         |         |         |        V|
23+25       1.9764      0.19  Q         |         |         |        V|
23+30       1.9777      0.19  Q         |         |         |        V|
23+35       1.9791      0.19  Q         |         |         |        V|
23+40       1.9804      0.19  Q         |         |         |        V|
23+45       1.9817      0.19  Q         |         |         |        V|
23+50       1.9830      0.19  Q         |         |         |        V|
23+55       1.9843      0.19  Q         |         |         |        V|
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   24+ 0       1.9857      0.19  Q         |         |         |        V|
   24+ 5       1.9863      0.10  Q         |         |         |        V|
   24+10       1.9865      0.02  Q         |         |         |        V|
   24+15       1.9865      0.00  Q         |         |         |         V
-------------------------------------------------------------------------
```

POST-DEVELOPMENT RATIONAL HYDROLOGY MAP
TTM 38346





LEGEND

NODE ELEV | AREA ACRES | LENGTH SOIL

WATERSHED BOUNDARY

FLOW PATH

0 50 150
25 100 200
SCALE: 1" = 50

POST-DEVELOPMENT
RATIONAL HYDROLOGY MAP
TTM 38346

PREPARATION DATE : DECEMBER 2021
REVISION DATE : JUNE 2022

PLAN PREPARED BY:
adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 · Fax:(951) 688-0599

Storm Event	Existing		Proposed		Routed		
	cfs	volume ac.ft.	cfs	volume ac.ft.	cfs	volume ac.ft.	Depth (ft)
2yr1hr	4.625	0.0941	8.244	0.2619	0.000	0.2620	1.77
2yr3hr	1.197	0.0650	4.401	0.3965	0.000	0.3960	2.68
2yr6hr	0.571	0.0686	3.654	0.4952	0.000	0.4940	3.35
2yr24hr	0.176	0.1071	1.304	0.7923	0.123	0.7430	5.03
5yr1hr	7.357	0.1569	11.846	0.3678	0.000	0.3680	2.49
5yr3hr	2.814	0.1168	6.058	0.5192	0.000	0.5190	3.52
5yr6hr	1.824	0.1124	5.091	0.6713	0.000	0.6700	4.54
5yr24hr	0.238	0.1447	1.762	1.0706	1.231	0.7870	5.33
10yr1hr	11.312	0.3053	15.042	0.4651	0.000	0.4650	3.15
10yr3hr	5.642	0.2423	7.794	0.6308	0.000	0.6300	4.27
10yr6hr	4.711	0.2434	6.826	0.8235	1.286	0.7890	5.35
10yr24hr	0.285	0.1731	2.108	1.2812	1.591	0.8010	5.43
100yr1hr	19.45	0.6204	24.242	0.7741	0.700	0.7660	5.12
100yr3hr	9.85	0.5218	12.140	0.9730	3.477	0.8720	5.91
100yr6hr	8.931	0.5810	11.186	1.3176	5.181	1.0280	6.97
100yr24hr	1.807	0.4304	3.410	1.9865	3.041	0.8590	5.82

CMP Underground Storage

	BASIN PARAMETERS					OUTLET								
Basin Elevation	Depth	Area S.F.	Volume C.F.	Volume AC-FT	Effective Volume AC-FT	Q_1 Orrifice Plate (cfs)	Q_2 Orrifice Plate (cfs)	Q_3 Orrifice Plate (cfs)	Q_4 Orrifice Plate (cfs)	Q_5Orrifice Plate (cfs)	Q_6 Orrifice Plate (cfs)	Q_7Orrifice Plate (cfs)	Q Weir 1 (cfs)	Q Total (cfs)
1455.00	0.00	6,428.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1456.00	1.00	6,428.00	6,428.00	0.148	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1457.00	2.00	6,428.00	12,856.00	0.295	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1458.00	3.00	6,428.00	19,284.00	0.443	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1459.00	4.00	6,428.00	25,712.00	0.590	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1460.00	5.00	6,428.00	32,140.00	0.738	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1461.00	6.00	6,428.00	38,568.00	0.885	0.148	1.849	1.849	0.000	0.000	0.000	0.000	0.000	0.000	3.698
1462.00	7.00	6,428.00	44,996.00	1.033	0.295	2.615	2.615	0.000	0.000	0.000	0.000	0.000	0.000	5.229

SUPPORTING DESIGN PARAMETERS

Orifice Coefficient	0.66		Dia of Orrifice	8.00	8.00						
Gravimetric Constant	32.2	ft/s^2	Eff Dia of Orrifice	0.6667	0.6667	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of Rows	1		Area of Orrifice	0.3491	0.3491	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Minimum Orrifice Plate Height			Number of Orrifeces	1	1	1	1	1	1	1	1
Minimum Orrifice Plate Width			Elev	1460	1460						

. Weir

Sharp Crest Weir Coefficient	0
Length of Weir	0.00
Elev. at Crest of Weir	1462

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                FLOOD HYDROGRAPH ROUTING PROGRAM
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                      Study date: 06/09/22

------------------------------------------------------------------------



Program License Serial Number 5006

------------------------------------------------------------------------
********************** HYDROGRAPH INFORMATION **********************

               From study/file name: PRO212.rte
*****************************HYDROGRAPH DATA*****************************
               Number of intervals =    15
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        8.244 (CFS)
               Total volume =       0.262 (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
************************************************************************



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** RETARDING BASIN ROUTING ****
________________________________________________________________________

User entry of depth-outflow-storage data
------------------------------------------------------------------------
Total number of inflow hydrograph intervals = 15
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  Storage    Outflow   (S-O*dt/2)   (S+O*dt/2)
     (Ft.)    (Ac.Ft)    (CFS)     (Ac.Ft)    (Ac.Ft)
------------------------------------------------------------------------
   0.000      0.000      0.000      0.000        0.000
   1.000      0.148      0.001      0.148        0.148
   2.000      0.295      0.002      0.295        0.295
   3.000      0.443      0.003      0.443        0.443
   4.000      0.590      0.004      0.590        0.590
   5.000      0.738      0.005      0.738        0.738
   6.000      0.885      3.698      0.872        0.898
   7.000      1.033      5.229      1.015        1.051
------------------------------------------------------------------------
               Hydrograph Detention Basin Routing
------------------------------------------------------------------------

Graph values: 'I'= unit inflow; 'O'=outflow at time shown
------------------------------------------------------------------------
 Time   Inflow  Outflow    Storage                                    Depth
(Hours) (CFS)   (CFS)     (Ac.Ft) .0       2.1    4.12    6.18    8.24 (Ft.)
 0.083    0.74    0.00      0.003  o I      |       |       |       |     0.02
 0.167    1.37    0.00      0.010  o    I   |       |       |       |     0.07
 0.250    1.63    0.00      0.020  o     I  |       |       |       |     0.14
 0.333    1.77    0.00      0.032  o     I  |       |       |       |     0.22
 0.417    1.93    0.00      0.045  o      I |       |       |       |     0.30
 0.500    2.18    0.00      0.059  o       I       |       |       |     0.40
 0.583    2.46    0.00      0.075  o       |I      |       |       |     0.50
 0.667    2.83    0.00      0.093  o       | I     |       |       |     0.63
 0.750    3.69    0.00      0.115  o       |     I |       |       |     0.78
 0.833    8.24    0.00      0.156  o       |       |       |       I     1.06
 0.917    6.75    0.00      0.208  o       |       |       | I     |     1.41
 1.000    2.94    0.00      0.241  o       |  I    |       |       |     1.64
 1.083    1.25    0.00      0.256  o   I   |       |       |       |     1.73
 1.167    0.20    0.00      0.261  o       |       |       |       |     1.77
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1.250    0.05    0.00      0.262  O       |       |       |       |     1.77
1.333    0.00    0.00      0.262  O       |       |       |       |     1.77

      Remaining water in basin =    0.26 (Ac.Ft)


      ****************************HYDROGRAPH DATA****************************
                    Number of intervals =    16
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.002 (CFS)
                    Total volume =       0.000 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO232.rte
**********HYDROGRAPH DATA**********
Number of intervals = 39
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 4.401 (CFS)
Total volume = 0.397 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 39
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.1 2.20 3.30 4.40	Depth (Ft.)
0.083	0.37	0.00	0.001	o I	0.01
0.167	0.67	0.00	0.005	o I	0.03
0.250	0.67	0.00	0.009	o I	0.06
0.333	0.76	0.00	0.014	o I	0.10
0.417	0.84	0.00	0.020	o I	0.13
0.500	0.94	0.00	0.026	o I	0.18
0.583	0.93	0.00	0.032	o I	0.22
0.667	0.96	0.00	0.039	o I	0.26
0.750	1.02	0.00	0.046	o I	0.31
0.833	0.95	0.00	0.053	o I	0.36
0.917	0.91	0.00	0.059	o I	0.40
1.000	0.98	0.00	0.065	o I	0.44
1.083	1.13	0.00	0.073	o I	0.49
1.167	1.24	0.00	0.081	o I	0.55

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1.250    1.26    0.00      0.090  o       |I      |       |       |     0.60
1.333    1.21    0.00      0.098  o       I       |       |       |     0.66
1.417    1.33    0.00      0.107  o       |I      |       |       |     0.72
1.500    1.49    0.00      0.116  o       | I     |       |       |     0.79
1.583    1.45    0.00      0.127  o       | I     |       |       |     0.86
1.667    1.48    0.00      0.137  o       | I     |       |       |     0.92
1.750    1.71    0.00      0.148  o       |   I   |       |       |     1.00
1.833    1.80    0.00      0.160  o       |    I  |       |       |     1.08
1.917    1.73    0.00      0.172  o       |   I   |       |       |     1.16
2.000    1.71    0.00      0.184  o       |   I   |       |       |     1.24
2.083    1.75    0.00      0.196  o       |   I   |       |       |     1.32
2.167    2.09    0.00      0.209  o       |      I|       |       |     1.41
2.250    2.58    0.00      0.225  o       |       | I     |       |     1.52
2.333    2.39    0.00      0.242  o       |       |I      |       |     1.64
2.417    3.02    0.00      0.261  o       |       |    I  |       |     1.77
2.500    3.88    0.00      0.284  o       |       |       |   I   |     1.93
2.583    4.40    0.00      0.313  o       |       |       |      I|     2.12
2.667    4.03    0.00      0.342  o       |       |       |    I  |     2.32
2.750    2.42    0.00      0.364  o       |       |I      |       |     2.47
2.833    1.36    0.00      0.377  o       |I      |       |       |     2.55
2.917    1.11    0.00      0.386  o       I       |       |       |     2.61
3.000    0.70    0.00      0.392  o    I  |       |       |       |     2.65
3.083    0.25    0.00      0.395  OI      |       |       |       |     2.68
3.167    0.05    0.00      0.396  o       |       |       |       |     2.68
3.250    0.01    0.00      0.396  o       |       |       |       |     2.68
3.333    0.00    0.00      0.396  o       |       |       |       |     2.68

 Remaining water in basin =    0.40 (Ac.Ft)

 ****************************HYDROGRAPH DATA****************************
               Number of intervals =    40
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.003 (CFS)
               Total volume =       0.000 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO262.rte
**********HYDROGRAPH DATA**********
Number of intervals = 75
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.654 (CFS)
Total volume = 0.495 (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

****

++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 75
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.9	1.83	2.74	3.65	Depth (Ft.)
0.083	0.18	0.00	0.001	OI	|	|	|	|	0.00
0.167	0.36	0.00	0.002	O I	|	|	|	|	0.02
0.250	0.41	0.00	0.005	O I	|	|	|	|	0.03
0.333	0.43	0.00	0.008	O I	|	|	|	|	0.05
0.417	0.43	0.00	0.011	O I	|	|	|	|	0.07
0.500	0.47	0.00	0.014	O I	|	|	|	|	0.10
0.583	0.50	0.00	0.017	O I	|	|	|	|	0.12
0.667	0.50	0.00	0.021	O I	|	|	|	|	0.14
0.750	0.50	0.00	0.024	O I	|	|	|	|	0.16
0.833	0.50	0.00	0.028	O I	|	|	|	|	0.19
0.917	0.50	0.00	0.031	O I	|	|	|	|	0.21
1.000	0.54	0.00	0.035	O I	|	|	|	|	0.24
1.083	0.57	0.00	0.039	O I	|	|	|	|	0.26
1.167	0.57	0.00	0.043	O I	|	|	|	|	0.29
1.250	0.58	0.00	0.046	O I	|	|	|	|	0.31
1.333	0.58	0.00	0.050	O I	|	|	|	|	0.34
1.417	0.58	0.00	0.054	O I	|	|	|	|	0.37
1.500	0.58	0.00	0.058	O I	|	|	|	|	0.39
1.583	0.58	0.00	0.062	O I	|	|	|	|	0.42
1.667	0.58	0.00	0.066	O I	|	|	|	|	0.45

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1.750    0.58    0.00      0.070  O    I  |        |        |        |      0.47
1.833    0.58    0.00      0.074  O    I  |        |        |        |      0.50
1.917    0.58    0.00      0.078  O    I  |        |        |        |      0.53
2.000    0.61    0.00      0.082  O    I  |        |        |        |      0.56
2.083    0.60    0.00      0.086  O    I  |        |        |        |      0.58
2.167    0.62    0.00      0.091  O    I  |        |        |        |      0.61
2.250    0.64    0.00      0.095  O    I  |        |        |        |      0.64
2.333    0.65    0.00      0.099  O    I  |        |        |        |      0.67
2.417    0.65    0.00      0.104  O    I  |        |        |        |      0.70
2.500    0.65    0.00      0.108  O    I  |        |        |        |      0.73
2.583    0.65    0.00      0.113  O    I  |        |        |        |      0.76
2.667    0.65    0.00      0.117  O    I  |        |        |        |      0.79
2.750    0.68    0.00      0.122  O    I  |        |        |        |      0.82
2.833    0.71    0.00      0.127  O     I |        |        |        |      0.85
2.917    0.72    0.00      0.131  O     I |        |        |        |      0.89
3.000    0.72    0.00      0.136  O     I |        |        |        |      0.92
3.083    0.72    0.00      0.141  O     I |        |        |        |      0.95
3.167    0.75    0.00      0.146  O     I |        |        |        |      0.99
3.250    0.78    0.00      0.152  O     I |        |        |        |      1.03
3.333    0.79    0.00      0.157  O     I |        |        |        |      1.06
3.417    0.83    0.00      0.163  O      I|        |        |        |      1.10
3.500    0.89    0.00      0.169  O      I|        |        |        |      1.14
3.583    0.96    0.00      0.175  O       I        |        |        |      1.18
3.667    1.00    0.00      0.182  O       I        |        |        |      1.23
3.750    1.04    0.00      0.189  O        |I       |        |        |      1.28
3.833    1.07    0.00      0.196  O        |I       |        |        |      1.33
3.917    1.11    0.00      0.203  O        |I       |        |        |      1.38
4.000    1.14    0.00      0.211  O        | I      |        |        |      1.43
4.083    1.18    0.00      0.219  O        | I      |        |        |      1.48
4.167    1.25    0.00      0.228  O        | I      |        |        |      1.54
4.250    1.32    0.00      0.236  O        |  I     |        |        |      1.60
4.333    1.39    0.00      0.246  O        |   I    |        |        |      1.66
4.417    1.46    0.00      0.256  O        |   I    |        |        |      1.73
4.500    1.50    0.00      0.266  O        |    I   |        |        |      1.80
4.583    1.54    0.00      0.276  O        |    I   |        |        |      1.87
4.667    1.61    0.00      0.287  O        |     I  |        |        |      1.95
4.750    1.68    0.00      0.298  O        |     I  |        |        |      2.02
4.833    1.72    0.00      0.310  O        |      I |        |        |      2.10
4.917    1.76    0.00      0.322  O        |      I |        |        |      2.18
5.000    1.83    0.00      0.334  O        |      I |        |        |      2.27
5.083    2.04    0.00      0.348  O        |        |I       |        |      2.36
5.167    2.37    0.00      0.363  O        |        |   I    |        |      2.46
5.250    2.65    0.00      0.380  O        |        |      I |        |      2.57
5.333    2.88    0.00      0.399  O        |        |        |I       |      2.70
5.417    3.17    0.00      0.420  O        |        |        |  I     |      2.84
5.500    3.65    0.00      0.443  O        |        |        |      I |      3.00
5.583    2.65    0.00      0.465  O        |        |      I |        |      3.15
5.667    1.27    0.00      0.478  O        |  I     |        |        |      3.24
5.750    0.68    0.00      0.485  O    I   |        |        |        |      3.29
5.833    0.44    0.00      0.489  O  I     |        |        |        |      3.31
5.917    0.30    0.00      0.491  O I      |        |        |        |      3.33
6.000    0.20    0.00      0.493  OI       |        |        |        |      3.34
6.083    0.08    0.00      0.494  O        |        |        |        |      3.35
6.167    0.02    0.00      0.494  O        |        |        |        |      3.35
6.250    0.00    0.00      0.494  O        |        |        |        |      3.35
6.333    0.00    0.00      0.494  O        |        |        |        |      3.35

Remaining water in basin =    0.49 (Ac.Ft)

*****************************HYDROGRAPH DATA*****************************
               Number of intervals =    76
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.003 (CFS)
               Total volume =       0.001 (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
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Study date: 06/09/22

Program License Serial Number 5006

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

From study/file name: pro2242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 291
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.304 (CFS)
Total volume = 0.792 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 291
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.3	0.65	0.98	1.30 Depth (Ft.)
0.083	0.04	0.00	0.000	O	|	|	|	0.00
0.167	0.07	0.00	0.000	OI	|	|	|	0.00
0.250	0.07	0.00	0.001	OI	|	|	|	0.01
0.333	0.10	0.00	0.002	O I	|	|	|	0.01
0.417	0.11	0.00	0.002	O I	|	|	|	0.02
0.500	0.11	0.00	0.003	O I	|	|	|	0.02
0.583	0.12	0.00	0.004	O I	|	|	|	0.03
0.667	0.12	0.00	0.005	O I	|	|	|	0.03
0.750	0.12	0.00	0.005	O I	|	|	|	0.04
0.833	0.13	0.00	0.006	O I	|	|	|	0.04
0.917	0.15	0.00	0.007	O I	|	|	|	0.05
1.000	0.15	0.00	0.008	O I	|	|	|	0.06
1.083	0.13	0.00	0.009	O I	|	|	|	0.06
1.167	0.12	0.00	0.010	O I	|	|	|	0.07
1.250	0.12	0.00	0.011	O I	|	|	|	0.07
1.333	0.12	0.00	0.012	O I	|	|	|	0.08
1.417	0.12	0.00	0.013	O I	|	|	|	0.08
1.500	0.12	0.00	0.013	O I	|	|	|	0.09
1.583	0.12	0.00	0.014	O I	|	|	|	0.10
1.667	0.12	0.00	0.015	O I	|	|	|	0.10

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1.750    0.12    0.00      0.016  o I     |        |        |        |     0.11
1.833    0.13    0.00      0.017  o  I    |        |        |        |     0.11
1.917    0.15    0.00      0.018  o  I    |        |        |        |     0.12
2.000    0.15    0.00      0.019  o  I    |        |        |        |     0.13
2.083    0.15    0.00      0.020  o  I    |        |        |        |     0.13
2.167    0.15    0.00      0.021  o  I    |        |        |        |     0.14
2.250    0.15    0.00      0.022  o  I    |        |        |        |     0.15
2.333    0.15    0.00      0.023  o  I    |        |        |        |     0.15
2.417    0.15    0.00      0.024  o  I    |        |        |        |     0.16
2.500    0.15    0.00      0.025  o  I    |        |        |        |     0.17
2.583    0.17    0.00      0.026  o   I   |        |        |        |     0.18
2.667    0.19    0.00      0.027  o   I   |        |        |        |     0.18
2.750    0.19    0.00      0.029  o   I   |        |        |        |     0.19
2.833    0.19    0.00      0.030  o   I   |        |        |        |     0.20
2.917    0.19    0.00      0.031  o   I   |        |        |        |     0.21
3.000    0.19    0.00      0.033  o   I   |        |        |        |     0.22
3.083    0.19    0.00      0.034  o   I   |        |        |        |     0.23
3.167    0.19    0.00      0.035  o   I   |        |        |        |     0.24
3.250    0.19    0.00      0.036  o   I   |        |        |        |     0.25
3.333    0.19    0.00      0.038  o   I   |        |        |        |     0.26
3.417    0.19    0.00      0.039  o   I   |        |        |        |     0.26
3.500    0.19    0.00      0.040  o   I   |        |        |        |     0.27
3.583    0.19    0.00      0.042  o   I   |        |        |        |     0.28
3.667    0.19    0.00      0.043  o   I   |        |        |        |     0.29
3.750    0.19    0.00      0.044  o   I   |        |        |        |     0.30
3.833    0.21    0.00      0.046  o    I  |        |        |        |     0.31
3.917    0.23    0.00      0.047  o    I  |        |        |        |     0.32
4.000    0.23    0.00      0.049  o    I  |        |        |        |     0.33
4.083    0.23    0.00      0.050  o    I  |        |        |        |     0.34
4.167    0.23    0.00      0.052  o    I  |        |        |        |     0.35
4.250    0.23    0.00      0.054  o    I  |        |        |        |     0.36
4.333    0.25    0.00      0.055  o     I |        |        |        |     0.37
4.417    0.26    0.00      0.057  o     I |        |        |        |     0.39
4.500    0.27    0.00      0.059  o     I |        |        |        |     0.40
4.583    0.27    0.00      0.061  o     I |        |        |        |     0.41
4.667    0.27    0.00      0.063  o     I |        |        |        |     0.42
4.750    0.27    0.00      0.064  o     I |        |        |        |     0.43
4.833    0.29    0.00      0.066  o      I|        |        |        |     0.45
4.917    0.30    0.00      0.068  o      I|        |        |        |     0.46
5.000    0.31    0.00      0.070  o      I|        |        |        |     0.48
5.083    0.27    0.00      0.072  o     I |        |        |        |     0.49
5.167    0.24    0.00      0.074  o    I  |        |        |        |     0.50
5.250    0.23    0.00      0.076  o    I  |        |        |        |     0.51
5.333    0.25    0.00      0.077  o     I |        |        |        |     0.52
5.417    0.26    0.00      0.079  o     I |        |        |        |     0.53
5.500    0.27    0.00      0.081  o     I |        |        |        |     0.55
5.583    0.29    0.00      0.083  o      I|        |        |        |     0.56
5.667    0.30    0.00      0.085  o      I|        |        |        |     0.57
5.750    0.31    0.00      0.087  o      I|        |        |        |     0.59
5.833    0.31    0.00      0.089  o      I|        |        |        |     0.60
5.917    0.31    0.00      0.091  o      I|        |        |        |     0.62
6.000    0.31    0.00      0.093  o      I|        |        |        |     0.63
6.083    0.33    0.00      0.096  o      I|        |        |        |     0.65
6.167    0.34    0.00      0.098  o       I        |        |        |     0.66
6.250    0.34    0.00      0.100  o       I        |        |        |     0.68
6.333    0.35    0.00      0.103  o       I        |        |        |     0.69
6.417    0.35    0.00      0.105  o       I        |        |        |     0.71
6.500    0.35    0.00      0.107  o       I        |        |        |     0.72
6.583    0.36    0.00      0.110  o       I        |        |        |     0.74
6.667    0.38    0.00      0.112  o       |I       |        |        |     0.76
6.750    0.38    0.00      0.115  o       |I       |        |        |     0.78
6.833    0.38    0.00      0.118  o       |I       |        |        |     0.79
6.917    0.38    0.00      0.120  o       |I       |        |        |     0.81
7.000    0.38    0.00      0.123  o       |I       |        |        |     0.83
7.083    0.38    0.00      0.125  o       |I       |        |        |     0.85
7.167    0.38    0.00      0.128  o       |I       |        |        |     0.87
7.250    0.38    0.00      0.131  o       |I       |        |        |     0.88
7.333    0.40    0.00      0.133  o       |I       |        |        |     0.90
7.417    0.42    0.00      0.136  o       | I      |        |        |     0.92
7.500    0.42    0.00      0.139  o       | I      |        |        |     0.94
7.583    0.44    0.00      0.142  o       | I      |        |        |     0.96
7.667    0.46    0.00      0.145  o       |  I     |        |        |     0.98
7.750    0.46    0.00      0.148  o       |  I     |        |        |     1.00
7.833    0.48    0.00      0.151  o       |  I     |        |        |     1.02
7.917    0.49    0.00      0.155  o       |   I    |        |        |     1.05
8.000    0.50    0.00      0.158  o       |   I    |        |        |     1.07
8.083    0.54    0.00      0.162  o       |    I   |        |        |     1.09
8.167    0.57    0.00      0.166  o       |    I   |        |        |     1.12
8.250    0.57    0.00      0.170  o       |     I  |        |        |     1.15
8.333    0.58    0.00      0.173  o       |     I  |        |        |     1.17
8.417    0.58    0.00      0.177  o       |     I  |        |        |     1.20
8.500    0.58    0.00      0.181  o       |     I  |        |        |     1.23
8.583    0.59    0.00      0.185  o       |     I  |        |        |     1.25
8.667    0.61    0.00      0.190  o       |     I  |        |        |     1.28
8.750    0.61    0.00      0.194  o       |      I |        |        |     1.31
8.833    0.63    0.00      0.198  o       |      I |        |        |     1.34
8.917    0.65    0.00      0.202  o       |      I |        |        |     1.37
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 9.000    0.65    0.00      0.207  o       |      I|       |       |     1.40
 9.083    0.69    0.00      0.211  o       |       I       |       |     1.43
 9.167    0.72    0.00      0.216  o       |       |I      |       |     1.46
 9.250    0.73    0.00      0.221  o       |       |I      |       |     1.50
 9.333    0.75    0.00      0.226  o       |       | I     |       |     1.53
 9.417    0.76    0.00      0.232  o       |       | I     |       |     1.57
 9.500    0.77    0.00      0.237  o       |       | I     |       |     1.60
 9.583    0.79    0.00      0.242  o       |       |  I    |       |     1.64
 9.667    0.80    0.00      0.248  o       |       |  I    |       |     1.68
 9.750    0.80    0.00      0.253  o       |       |  I    |       |     1.71
 9.833    0.82    0.00      0.259  o       |       |   I   |       |     1.75
 9.917    0.84    0.00      0.264  o       |       |   I   |       |     1.79
10.000    0.84    0.00      0.270  o       |       |   I   |       |     1.83
10.083    0.71    0.00      0.276  o       |       |I      |       |     1.87
10.167    0.60    0.00      0.280  o       |     I |       |       |     1.90
10.250    0.58    0.00      0.284  o       |     I |       |       |     1.93
10.333    0.58    0.00      0.288  o       |     I |       |       |     1.95
10.417    0.58    0.00      0.292  o       |     I |       |       |     1.98
10.500    0.58    0.00      0.296  o       |     I |       |       |     2.01
10.583    0.67    0.00      0.300  o       |       I       |       |     2.04
10.667    0.75    0.00      0.305  o       |       | I     |       |     2.07
10.750    0.76    0.00      0.310  o       |       | I     |       |     2.10
10.833    0.77    0.00      0.316  o       |       | I     |       |     2.14
10.917    0.77    0.00      0.321  o       |       | I     |       |     2.17
11.000    0.77    0.00      0.326  o       |       | I     |       |     2.21
11.083    0.75    0.00      0.331  o       |       | I     |       |     2.25
11.167    0.73    0.00      0.336  o       |       |I      |       |     2.28
11.250    0.73    0.00      0.341  o       |       |I      |       |     2.31
11.333    0.73    0.00      0.346  o       |       |I      |       |     2.35
11.417    0.73    0.00      0.351  o       |       |I      |       |     2.38
11.500    0.73    0.00      0.356  o       |       |I      |       |     2.41
11.583    0.69    0.00      0.361  o       |       I       |       |     2.45
11.667    0.66    0.00      0.366  o       |       I       |       |     2.48
11.750    0.65    0.00      0.370  o       |       I       |       |     2.51
11.833    0.67    0.00      0.375  o       |       I       |       |     2.54
11.917    0.69    0.00      0.380  o       |       I       |       |     2.57
12.000    0.69    0.00      0.384  o       |       I       |       |     2.60
12.083    0.82    0.00      0.390  o       |       |   I   |       |     2.64
12.167    0.93    0.00      0.396  o       |       |     I |       |     2.68
12.250    0.95    0.00      0.402  o       |       |      I|       |     2.72
12.333    0.98    0.00      0.409  o       |       |      I|       |     2.77
12.417    0.99    0.00      0.415  o       |       |       I       |     2.81
12.500    1.00    0.00      0.422  o       |       |       I       |     2.86
12.583    1.03    0.00      0.429  o       |       |       |I      |     2.91
12.667    1.07    0.00      0.436  o       |       |       | I     |     2.96
12.750    1.07    0.00      0.444  o       |       |       | I     |     3.01
12.833    1.09    0.00      0.451  o       |       |       | I     |     3.06
12.917    1.11    0.00      0.459  o       |       |       |  I    |     3.11
13.000    1.11    0.00      0.466  o       |       |       |  I    |     3.16
13.083    1.21    0.00      0.474  o       |       |       |    I  |     3.21
13.167    1.28    0.00      0.483  o       |       |       |     I|     3.27
13.250    1.30    0.00      0.492  o       |       |       |     I|     3.33
13.333    1.30    0.00      0.501  o       |       |       |      I     3.39
13.417    1.30    0.00      0.510  o       |       |       |      I     3.45
13.500    1.30    0.00      0.519  o       |       |       |      I     3.51
13.583    1.10    0.00      0.527  o       |       |       | I     |     3.57
13.667    0.92    0.00      0.534  o       |       |     I |       |     3.62
13.750    0.89    0.00      0.540  o       |       |    I  |       |     3.66
13.833    0.88    0.00      0.546  o       |       |    I  |       |     3.70
13.917    0.88    0.00      0.552  o       |       |    I  |       |     3.74
14.000    0.88    0.00      0.558  o       |       |    I  |       |     3.78
14.083    0.96    0.00      0.564  o       |       |      I|       |     3.83
14.167    1.02    0.00      0.571  o       |       |       |I      |     3.87
14.250    1.03    0.00      0.578  o       |       |       |I      |     3.92
14.333    1.02    0.00      0.585  o       |       |       I       |     3.97
14.417    1.00    0.00      0.592  o       |       |       I       |     4.02
14.500    1.00    0.00      0.599  o       |       |       I       |     4.06
14.583    1.00    0.00      0.606  o       |       |       I       |     4.11
14.667    1.00    0.00      0.613  o       |       |       I       |     4.15
14.750    1.00    0.00      0.620  o       |       |       I       |     4.20
14.833    0.98    0.00      0.626  o       |       |       I       |     4.25
14.917    0.96    0.00      0.633  o       |       |      I|       |     4.29
15.000    0.96    0.00      0.640  o       |       |      I|       |     4.34
15.083    0.94    0.00      0.646  o       |       |      I|       |     4.38
15.167    0.92    0.00      0.653  o       |       |     I |       |     4.42
15.250    0.92    0.00      0.659  o       |       |     I |       |     4.47
15.333    0.90    0.00      0.665  o       |       |     I |       |     4.51
15.417    0.89    0.00      0.671  o       |       |    I  |       |     4.55
15.500    0.88    0.00      0.677  o       |       |    I  |       |     4.59
15.583    0.81    0.00      0.683  o       |       |  I    |       |     4.63
15.667    0.74    0.00      0.688  o       |       | I     |       |     4.66
15.750    0.73    0.00      0.693  o       |       |I      |       |     4.70
15.833    0.73    0.00      0.698  o       |       |I      |       |     4.73
15.917    0.73    0.00      0.703  o       |       |I      |       |     4.77
16.000    0.73    0.00      0.708  o       |       |I      |       |     4.80
16.083    0.45    0.00      0.712  o       | I     |       |       |     4.83
16.167    0.21    0.00      0.715  o    I  |       |       |       |     4.84
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16.250	0.17	0.00	0.716	O I				4.85
16.333	0.15	0.00	0.717	O I				4.86
16.417	0.15	0.00	0.718	O I				4.87
16.500	0.15	0.00	0.719	O I				4.87
16.583	0.13	0.00	0.720	O I				4.88
16.667	0.12	0.00	0.721	O I				4.88
16.750	0.12	0.00	0.722	O I				4.89
16.833	0.12	0.00	0.722	O I				4.89
16.917	0.12	0.00	0.723	O I				4.90
17.000	0.12	0.00	0.724	O I				4.90
17.083	0.15	0.00	0.725	O I				4.91
17.167	0.18	0.00	0.726	O I				4.92
17.250	0.19	0.00	0.727	O I				4.93
17.333	0.19	0.00	0.728	O I				4.94
17.417	0.19	0.00	0.730	O I				4.94
17.500	0.19	0.00	0.731	O I				4.95
17.583	0.19	0.00	0.732	O I				4.96
17.667	0.19	0.00	0.734	O I				4.97
17.750	0.19	0.00	0.735	O I				4.98
17.833	0.17	0.00	0.736	O I				4.99
17.917	0.16	0.00	0.737	O I				4.99
18.000	0.15	0.01	0.738	O I				5.00
18.083	0.15	0.03	0.739	O I				5.01
18.167	0.15	0.05	0.740	|O I				5.01
18.250	0.15	0.07	0.741	|O I				5.02
18.333	0.15	0.08	0.741	| OI				5.02
18.417	0.15	0.09	0.742	| OI				5.02
18.500	0.15	0.10	0.742	| OI				5.03
18.583	0.13	0.11	0.742	| OI				5.03
18.667	0.12	0.11	0.742	| O				5.03
18.750	0.12	0.11	0.742	| O				5.03
18.833	0.10	0.11	0.742	| O				5.03
18.917	0.08	0.11	0.742	|IO				5.03
19.000	0.08	0.10	0.742	|IO				5.03
19.083	0.10	0.10	0.742	| O				5.03
19.167	0.11	0.10	0.742	| O				5.03
19.250	0.11	0.10	0.742	| O				5.03
19.333	0.13	0.11	0.742	| OI				5.03
19.417	0.15	0.11	0.742	| OI				5.03
19.500	0.15	0.12	0.743	| OI				5.03
19.583	0.13	0.12	0.743	| O				5.03
19.667	0.12	0.12	0.743	| IO				5.03
19.750	0.12	0.12	0.743	| O				5.03
19.833	0.10	0.12	0.743	| O				5.03
19.917	0.08	0.11	0.742	|IO				5.03
20.000	0.08	0.11	0.742	|IO				5.03
20.083	0.10	0.11	0.742	| O				5.03
20.167	0.11	0.11	0.742	| O				5.03
20.250	0.11	0.11	0.742	| O				5.03
20.333	0.12	0.11	0.742	| O				5.03
20.417	0.12	0.11	0.742	| O				5.03
20.500	0.12	0.11	0.742	| O				5.03
20.583	0.12	0.11	0.742	| O				5.03
20.667	0.12	0.11	0.742	| O				5.03
20.750	0.12	0.11	0.742	| O				5.03
20.833	0.10	0.11	0.742	| O				5.03
20.917	0.08	0.11	0.742	|IO				5.03
21.000	0.08	0.10	0.742	|IO				5.03
21.083	0.10	0.10	0.742	| O				5.03
21.167	0.11	0.10	0.742	| O				5.03
21.250	0.11	0.10	0.742	| O				5.03
21.333	0.10	0.10	0.742	| O				5.03
21.417	0.08	0.10	0.742	|IO				5.03
21.500	0.08	0.10	0.742	|IO				5.02
21.583	0.10	0.10	0.742	| O				5.02
21.667	0.11	0.10	0.742	| O				5.02
21.750	0.11	0.10	0.742	| O				5.03
21.833	0.10	0.10	0.742	| O				5.03
21.917	0.08	0.10	0.742	|IO				5.03
22.000	0.08	0.10	0.742	|IO				5.02
22.083	0.10	0.09	0.742	| O				5.02
22.167	0.11	0.10	0.742	| O				5.02
22.250	0.11	0.10	0.742	| O				5.03
22.333	0.10	0.10	0.742	| O				5.03
22.417	0.08	0.10	0.742	|IO				5.03
22.500	0.08	0.09	0.742	|IO				5.02
22.583	0.08	0.09	0.741	|IO				5.02
22.667	0.08	0.09	0.741	|IO				5.02
22.750	0.08	0.09	0.741	|IO				5.02
22.833	0.08	0.09	0.741	|IO				5.02
22.917	0.08	0.08	0.741	|IO				5.02
23.000	0.08	0.08	0.741	|IO				5.02
23.083	0.08	0.08	0.741	|IO				5.02
23.167	0.08	0.08	0.741	|O				5.02
23.250	0.08	0.08	0.741	|O				5.02
23.333	0.08	0.08	0.741	|O				5.02
23.417	0.08	0.08	0.741	|O				5.02

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23.500    0.08    0.08      0.741  |O      |       |       |       |     5.02
23.583    0.08    0.08      0.741  |O      |       |       |       |     5.02
23.667    0.08    0.08      0.741  |O      |       |       |       |     5.02
23.750    0.08    0.08      0.741  |O      |       |       |       |     5.02
23.833    0.08    0.08      0.741  |O      |       |       |       |     5.02
23.917    0.08    0.08      0.741  |O      |       |       |       |     5.02
24.000    0.08    0.08      0.741  |O      |       |       |       |     5.02
24.083    0.04    0.07      0.741  IO      |       |       |       |     5.02
24.167    0.01    0.07      0.740  IO      |       |       |       |     5.02
24.250    0.00    0.06      0.740  IO      |       |       |       |     5.01
24.333    0.00    0.05      0.740  IO      |       |       |       |     5.01

Remaining water in basin =    0.74 (Ac.Ft)

****************************HYDROGRAPH DATA****************************
               Number of intervals =   292
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.123 (CFS)
               Total volume =       0.053 (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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Study date: 06/09/22

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

From study/file name: PRO515.rte
**********HYDROGRAPH DATA**********
Number of intervals = 15
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.846 (CFS)
Total volume = 0.368 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 15
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	3.0	5.92	8.88	11.85	Depth (Ft.)
0.083	1.02	0.00	0.003	O I	|	|	|	|	0.02
0.167	1.89	0.00	0.013	O I	|	|	|	|	0.09
0.250	2.24	0.00	0.028	O I	|	|	|	|	0.19
0.333	2.43	0.00	0.044	O I	|	|	|	|	0.30
0.417	2.66	0.00	0.061	O I	|	|	|	|	0.41
0.500	3.00	0.00	0.081	O I	|	|	|	|	0.55
0.583	3.38	0.00	0.103	O I	|	|	|	|	0.69
0.667	3.89	0.00	0.128	O I	|	|	|	|	0.86
0.750	5.33	0.00	0.160	O |	I |	|	|	|	1.08
0.833	11.85	0.00	0.219	O |	|	|	|	I	1.48
0.917	9.56	0.00	0.292	O |	|	|	I	|	1.98
1.000	4.10	0.00	0.339	O |	I |	|	|	|	2.30
1.083	1.73	0.00	0.359	O I	|	|	|	|	2.44
1.167	0.27	0.00	0.366	O |	|	|	|	|	2.48
1.250	0.06	0.00	0.367	O |	|	|	|	|	2.49
1.333	0.00	0.00	0.368	O |	|	|	|	|	2.49

Remaining water in basin = 0.37 (Ac.Ft)

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****************************HYDROGRAPH DATA****************************
               Number of intervals =    16
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.002 (CFS)
               Total volume =       0.000 (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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Program License Serial Number 5006

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

From study/file name: PRO535.rte
**********HYDROGRAPH DATA**********
Number of intervals = 39
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.058 (CFS)
Total volume = 0.519 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 39
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.5	3.03	4.54	6.06	Depth (Ft.)
0.083	0.47	0.00	0.002	O I	|	|	|	|	0.01
0.167	0.87	0.00	0.006	O I	|	|	|	|	0.04
0.250	0.87	0.00	0.012	O I	|	|	|	|	0.08
0.333	0.98	0.00	0.019	O I	|	|	|	|	0.13
0.417	1.09	0.00	0.026	O I	|	|	|	|	0.17
0.500	1.22	0.00	0.034	O I	|	|	|	|	0.23
0.583	1.21	0.00	0.042	O I	|	|	|	|	0.28
0.667	1.24	0.00	0.050	O I	|	|	|	|	0.34
0.750	1.32	0.00	0.059	O I	|	|	|	|	0.40
0.833	1.22	0.00	0.068	O I	|	|	|	|	0.46
0.917	1.17	0.00	0.076	O I	|	|	|	|	0.52
1.000	1.26	0.00	0.085	O I	|	|	|	|	0.57
1.083	1.47	0.00	0.094	O I	|	|	|	|	0.64
1.167	1.60	0.00	0.105	O I	|	|	|	|	0.71
1.250	1.63	0.00	0.116	O I	|	|	|	|	0.78
1.333	1.56	0.00	0.127	O I	|	|	|	|	0.86
1.417	1.72	0.00	0.138	O I	|	|	|	|	0.93
1.500	1.93	0.00	0.151	O I	|	|	|	|	1.02
1.583	1.88	0.00	0.164	O I	|	|	|	|	1.11
1.667	1.91	0.00	0.177	O I	|	|	|	|	1.20

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1.750    2.21    0.00      0.191  O       |  I    |       |       |     1.29
1.833    2.33    0.00      0.207  O       |   I   |       |       |     1.40
1.917    2.24    0.00      0.222  O       |  I    |       |       |     1.51
2.000    2.21    0.00      0.238  O       |  I    |       |       |     1.61
2.083    2.26    0.00      0.253  O       |  I    |       |       |     1.71
2.167    2.70    0.00      0.270  O       |     I |       |       |     1.83
2.250    3.33    0.00      0.291  O       |       |I      |       |     1.97
2.333    3.09    0.00      0.313  O       |       I       |       |     2.12
2.417    3.99    0.00      0.337  O       |       |    I  |       |     2.29
2.500    5.24    0.00      0.369  O       |       |       |  I    |     2.50
2.583    6.06    0.00      0.408  O       |       |       |      I|     2.76
2.667    5.43    0.00      0.447  O       |       |       |   I   |     3.03
2.750    3.17    0.00      0.477  O       |       I       |       |     3.23
2.833    1.77    0.00      0.494  O       |I      |       |       |     3.35
2.917    1.43    0.00      0.505  O      I|       |       |       |     3.42
3.000    0.91    0.00      0.513  O   I   |       |       |       |     3.48
3.083    0.32    0.00      0.517  OI      |       |       |       |     3.50
3.167    0.07    0.00      0.518  O       |       |       |       |     3.51
3.250    0.01    0.00      0.519  O       |       |       |       |     3.52
3.333    0.00    0.00      0.519  O       |       |       |       |     3.52

 Remaining water in basin =    0.52 (Ac.Ft)

 ****************************HYDROGRAPH DATA****************************
                 Number of intervals =    40
                 Time interval =    5.0 (Min.)
                 Maximum/Peak flow rate =        0.004 (CFS)
                 Total volume =       0.000 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO565.rte
**********HYDROGRAPH DATA**********
Number of intervals = 75
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 5.091 (CFS)
Total volume = 0.671 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 75
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.3	2.55	3.82	5.09	Depth (Ft.)
0.083	0.24	0.00	0.001	OI	|	|	|	|	0.01
0.167	0.48	0.00	0.003	O I	|	|	|	|	0.02
0.250	0.56	0.00	0.007	O I	|	|	|	|	0.05
0.333	0.58	0.00	0.011	O I	|	|	|	|	0.07
0.417	0.58	0.00	0.015	O I	|	|	|	|	0.10
0.500	0.63	0.00	0.019	O I	|	|	|	|	0.13
0.583	0.67	0.00	0.023	O I	|	|	|	|	0.16
0.667	0.68	0.00	0.028	O I	|	|	|	|	0.19
0.750	0.68	0.00	0.033	O I	|	|	|	|	0.22
0.833	0.68	0.00	0.037	O I	|	|	|	|	0.25
0.917	0.68	0.00	0.042	O I	|	|	|	|	0.28
1.000	0.73	0.00	0.047	O I	|	|	|	|	0.32
1.083	0.77	0.00	0.052	O I	|	|	|	|	0.35
1.167	0.77	0.00	0.057	O I	|	|	|	|	0.39
1.250	0.78	0.00	0.063	O I	|	|	|	|	0.42
1.333	0.78	0.00	0.068	O I	|	|	|	|	0.46
1.417	0.78	0.00	0.074	O I	|	|	|	|	0.50
1.500	0.78	0.00	0.079	O I	|	|	|	|	0.53
1.583	0.78	0.00	0.084	O I	|	|	|	|	0.57
1.667	0.78	0.00	0.090	O I	|	|	|	|	0.61

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1.750    0.78    0.00      0.095  o   I   |        |        |        |     0.64
1.833    0.78    0.00      0.100  o   I   |        |        |        |     0.68
1.917    0.78    0.00      0.106  o   I   |        |        |        |     0.71
2.000    0.82    0.00      0.111  o    I  |        |        |        |     0.75
2.083    0.82    0.00      0.117  o    I  |        |        |        |     0.79
2.167    0.83    0.00      0.122  o    I  |        |        |        |     0.83
2.250    0.87    0.00      0.128  o    I  |        |        |        |     0.87
2.333    0.87    0.00      0.134  o    I  |        |        |        |     0.91
2.417    0.87    0.00      0.140  o    I  |        |        |        |     0.95
2.500    0.87    0.00      0.146  o    I  |        |        |        |     0.99
2.583    0.87    0.00      0.152  o    I  |        |        |        |     1.03
2.667    0.87    0.00      0.158  o    I  |        |        |        |     1.07
2.750    0.92    0.00      0.164  o    I  |        |        |        |     1.11
2.833    0.96    0.00      0.171  o     I |        |        |        |     1.16
2.917    0.97    0.00      0.178  o     I |        |        |        |     1.20
3.000    0.97    0.00      0.184  o     I |        |        |        |     1.25
3.083    0.97    0.00      0.191  o     I |        |        |        |     1.29
3.167    1.02    0.00      0.198  o     I |        |        |        |     1.34
3.250    1.06    0.00      0.205  o     I |        |        |        |     1.39
3.333    1.07    0.00      0.212  o     I |        |        |        |     1.44
3.417    1.12    0.00      0.220  o      I|        |        |        |     1.49
3.500    1.20    0.00      0.228  o      I|        |        |        |     1.54
3.583    1.30    0.00      0.236  o       I        |        |        |     1.60
3.667    1.35    0.00      0.245  o       I        |        |        |     1.66
3.750    1.41    0.00      0.255  o       I        |        |        |     1.73
3.833    1.45    0.00      0.265  o       |I       |        |        |     1.79
3.917    1.50    0.00      0.275  o       |I       |        |        |     1.86
4.000    1.54    0.00      0.285  o       |I       |        |        |     1.93
4.083    1.60    0.00      0.296  o       | I      |        |        |     2.01
4.167    1.69    0.00      0.307  o       | I      |        |        |     2.08
4.250    1.78    0.00      0.319  o       |  I     |        |        |     2.17
4.333    1.88    0.00      0.332  o       |  I     |        |        |     2.25
4.417    1.98    0.00      0.345  o       |   I    |        |        |     2.34
4.500    2.03    0.00      0.359  o       |   I    |        |        |     2.43
4.583    2.09    0.00      0.373  o       |    I   |        |        |     2.53
4.667    2.18    0.00      0.388  o       |    I   |        |        |     2.63
4.750    2.27    0.00      0.403  o       |     I  |        |        |     2.73
4.833    2.32    0.00      0.419  o       |     I  |        |        |     2.84
4.917    2.38    0.00      0.435  o       |     I  |        |        |     2.95
5.000    2.47    0.00      0.452  o       |      I |        |        |     3.06
5.083    2.75    0.00      0.470  o       |        |I       |        |     3.18
5.167    3.20    0.00      0.490  o       |        |   I    |        |     3.32
5.250    3.58    0.00      0.514  o       |        |     I  |        |     3.48
5.333    3.89    0.00      0.539  o       |        |        I        |     3.65
5.417    4.28    0.00      0.567  o       |        |        | I      |     3.85
5.500    5.09    0.00      0.600  o       |        |        |       I|     4.06
5.583    3.71    0.00      0.630  o       |        |      I |        |     4.27
5.667    1.74    0.00      0.649  o       | I      |        |        |     4.40
5.750    0.93    0.00      0.658  o    I  |        |        |        |     4.46
5.833    0.59    0.00      0.663  o  I    |        |        |        |     4.49
5.917    0.41    0.00      0.666  o I     |        |        |        |     4.52
6.000    0.27    0.00      0.669  oI      |        |        |        |     4.53
6.083    0.11    0.00      0.670  o       |        |        |        |     4.54
6.167    0.02    0.00      0.670  o       |        |        |        |     4.54
6.250    0.01    0.00      0.670  o       |        |        |        |     4.54
6.333    0.00    0.00      0.670  o       |        |        |        |     4.54

 Remaining water in basin =    0.67 (Ac.Ft)

 ****************************HYDROGRAPH DATA****************************
               Number of intervals =    76
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.005 (CFS)
               Total volume =       0.001 (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
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Study date: 06/09/22

Program License Serial Number 5006

********** HYDROGRAPH INFORMATION **********
From study/file name: PRO5245.rte
**********HYDROGRAPH DATA**********
Number of intervals = 291
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 1.762 (CFS)
Total volume = 1.071 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 291
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.4	0.88	1.32	1.76	Depth (Ft.)
0.083	0.05	0.00	0.000	O					0.00
0.167	0.09	0.00	0.001	OI					0.00
0.250	0.10	0.00	0.001	OI					0.01
0.333	0.13	0.00	0.002	O I					0.01
0.417	0.15	0.00	0.003	O I					0.02
0.500	0.15	0.00	0.004	O I					0.03
0.583	0.16	0.00	0.005	O I					0.04
0.667	0.16	0.00	0.006	O I					0.04
0.750	0.16	0.00	0.007	O I					0.05
0.833	0.18	0.00	0.009	O I					0.06
0.917	0.20	0.00	0.010	O I					0.07
1.000	0.21	0.00	0.011	O I					0.08
1.083	0.18	0.00	0.013	O I					0.08
1.167	0.16	0.00	0.014	O I					0.09
1.250	0.16	0.00	0.015	O I					0.10
1.333	0.16	0.00	0.016	O I					0.11
1.417	0.16	0.00	0.017	O I					0.11
1.500	0.16	0.00	0.018	O I					0.12
1.583	0.16	0.00	0.019	O I					0.13
1.667	0.16	0.00	0.020	O I					0.14
1.750	0.16	0.00	0.021	O I					0.14
1.833	0.18	0.00	0.022	O I					0.15
1.917	0.20	0.00	0.024	O I					0.16
2.000	0.21	0.00	0.025	O I					0.17
2.083	0.21	0.00	0.027	O I					0.18
2.167	0.21	0.00	0.028	O I					0.19
2.250	0.21	0.00	0.029	O I					0.20
2.333	0.21	0.00	0.031	O I					0.21

2.417	0.21	0.00	0.032	o	I	|	|	|	0.22
2.500	0.21	0.00	0.034	o	I	|	|	|	0.23
2.583	0.23	0.00	0.035	o	I	|	|	|	0.24
2.667	0.25	0.00	0.037	o	I	|	|	|	0.25
2.750	0.26	0.00	0.039	o	I	|	|	|	0.26
2.833	0.26	0.00	0.040	o	I	|	|	|	0.27
2.917	0.26	0.00	0.042	o	I	|	|	|	0.29
3.000	0.26	0.00	0.044	o	I	|	|	|	0.30
3.083	0.26	0.00	0.046	o	I	|	|	|	0.31
3.167	0.26	0.00	0.048	o	I	|	|	|	0.32
3.250	0.26	0.00	0.049	o	I	|	|	|	0.33
3.333	0.26	0.00	0.051	o	I	|	|	|	0.35
3.417	0.26	0.00	0.053	o	I	|	|	|	0.36
3.500	0.26	0.00	0.055	o	I	|	|	|	0.37
3.583	0.26	0.00	0.056	o	I	|	|	|	0.38
3.667	0.26	0.00	0.058	o	I	|	|	|	0.39
3.750	0.26	0.00	0.060	o	I	|	|	|	0.41
3.833	0.28	0.00	0.062	o	I	|	|	|	0.42
3.917	0.31	0.00	0.064	o	I	|	|	|	0.43
4.000	0.31	0.00	0.066	o	I	|	|	|	0.45
4.083	0.31	0.00	0.068	o	I	|	|	|	0.46
4.167	0.31	0.00	0.070	o	I	|	|	|	0.47
4.250	0.31	0.00	0.072	o	I	|	|	|	0.49
4.333	0.34	0.00	0.075	o	I	|	|	|	0.50
4.417	0.36	0.00	0.077	o	I	|	|	|	0.52
4.500	0.36	0.00	0.080	o	I	|	|	|	0.54
4.583	0.36	0.00	0.082	o	I	|	|	|	0.55
4.667	0.36	0.00	0.085	o	I	|	|	|	0.57
4.750	0.36	0.00	0.087	o	I	|	|	|	0.59
4.833	0.39	0.00	0.090	o	I	|	|	|	0.61
4.917	0.41	0.00	0.092	o	I	|	|	|	0.62
5.000	0.41	0.00	0.095	o	I	|	|	|	0.64
5.083	0.36	0.00	0.098	o	I	|	|	|	0.66
5.167	0.32	0.00	0.100	o	I	|	|	|	0.68
5.250	0.31	0.00	0.102	o	I	|	|	|	0.69
5.333	0.34	0.00	0.105	o	I	|	|	|	0.71
5.417	0.36	0.00	0.107	o	I	|	|	|	0.72
5.500	0.36	0.00	0.109	o	I	|	|	|	0.74
5.583	0.39	0.00	0.112	o	I	|	|	|	0.76
5.667	0.41	0.00	0.115	o	I	|	|	|	0.78
5.750	0.41	0.00	0.118	o	I	|	|	|	0.79
5.833	0.41	0.00	0.120	o	I	|	|	|	0.81
5.917	0.41	0.00	0.123	o	I	|	|	|	0.83
6.000	0.41	0.00	0.126	o	I	|	|	|	0.85
6.083	0.44	0.00	0.129	o	I	|	|	|	0.87
6.167	0.46	0.00	0.132	o	I	|	|	|	0.89
6.250	0.47	0.00	0.135	o	I	|	|	|	0.91
6.333	0.47	0.00	0.139	o	I	|	|	|	0.94
6.417	0.47	0.00	0.142	o	I	|	|	|	0.96
6.500	0.47	0.00	0.145	o	I	|	|	|	0.98
6.583	0.49	0.00	0.148	o	I	|	|	|	1.00
6.667	0.51	0.00	0.152	o	I	|	|	|	1.03
6.750	0.52	0.00	0.155	o	I	|	|	|	1.05
6.833	0.52	0.00	0.159	o	I	|	|	|	1.07
6.917	0.52	0.00	0.162	o	I	|	|	|	1.10
7.000	0.52	0.00	0.166	o	I	|	|	|	1.12
7.083	0.52	0.00	0.169	o	I	|	|	|	1.15
7.167	0.52	0.00	0.173	o	I	|	|	|	1.17
7.250	0.52	0.00	0.177	o	I	|	|	|	1.19
7.333	0.54	0.00	0.180	o	I	|	|	|	1.22
7.417	0.56	0.00	0.184	o	I	|	|	|	1.25
7.500	0.57	0.00	0.188	o	I	|	|	|	1.27
7.583	0.60	0.00	0.192	o	I	|	|	|	1.30
7.667	0.62	0.00	0.196	o	I	|	|	|	1.33
7.750	0.62	0.00	0.200	o	I	|	|	|	1.36
7.833	0.65	0.00	0.205	o	I	|	|	|	1.39
7.917	0.67	0.00	0.209	o	I	|	|	|	1.42
8.000	0.67	0.00	0.214	o	I	|	|	|	1.45
8.083	0.72	0.00	0.219	o	I	|	|	|	1.48
8.167	0.77	0.00	0.224	o	I	|	|	|	1.52
8.250	0.77	0.00	0.229	o	I	|	|	|	1.55
8.333	0.78	0.00	0.234	o	I	|	|	|	1.59
8.417	0.78	0.00	0.240	o	I	|	|	|	1.62
8.500	0.78	0.00	0.245	o	I	|	|	|	1.66
8.583	0.80	0.00	0.251	o	I	|	|	|	1.70
8.667	0.82	0.00	0.256	o	I	|	|	|	1.74
8.750	0.83	0.00	0.262	o	I	|	|	|	1.77
8.833	0.85	0.00	0.268	o	I	|	|	|	1.81
8.917	0.88	0.00	0.274	o	I	|	|	|	1.85
9.000	0.88	0.00	0.280	o	I	|	|	|	1.89
9.083	0.93	0.00	0.286	o	I	|	|	|	1.94
9.167	0.97	0.00	0.292	o	I	|	|	|	1.98
9.250	0.98	0.00	0.299	o	I	|	|	|	2.03
9.333	1.01	0.00	0.306	o	I	|	|	|	2.07
9.417	1.03	0.00	0.313	o	I	|	|	|	2.12
9.500	1.04	0.00	0.320	o	I	|	|	|	2.17
9.583	1.06	0.00	0.327	o	I	|	|	|	2.22

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 9.667    1.08    0.00      0.335  o       |        |  I    |        |     2.27
 9.750    1.09    0.00      0.342  o       |        |  I    |        |     2.32
 9.833    1.11    0.00      0.350  o       |        |   I   |        |     2.37
 9.917    1.13    0.00      0.357  o       |        |   I   |        |     2.42
10.000    1.14    0.00      0.365  o       |        |   I   |        |     2.47
10.083    0.96    0.00      0.372  o       |        |I      |        |     2.52
10.167    0.81    0.00      0.378  o       |     I  |       |        |     2.56
10.250    0.79    0.00      0.384  o       |     I  |       |        |     2.60
10.333    0.78    0.00      0.389  o       |     I  |       |        |     2.64
10.417    0.78    0.00      0.395  o       |     I  |       |        |     2.67
10.500    0.78    0.00      0.400  o       |     I  |       |        |     2.71
10.583    0.90    0.00      0.406  o       |       I|       |        |     2.75
10.667    1.01    0.00      0.412  o       |        | I     |        |     2.79
10.750    1.03    0.00      0.419  o       |        | I     |        |     2.84
10.833    1.04    0.00      0.426  o       |        | I     |        |     2.89
10.917    1.04    0.00      0.434  o       |        | I     |        |     2.94
11.000    1.04    0.00      0.441  o       |        | I     |        |     2.98
11.083    1.01    0.00      0.448  o       |        | I     |        |     3.03
11.167    0.99    0.00      0.455  o       |        |I      |        |     3.08
11.250    0.99    0.00      0.461  o       |        |I      |        |     3.12
11.333    0.98    0.00      0.468  o       |        |I      |        |     3.17
11.417    0.98    0.00      0.475  o       |        |I      |        |     3.22
11.500    0.98    0.00      0.482  o       |        |I      |        |     3.26
11.583    0.93    0.00      0.488  o       |        I       |        |     3.31
11.667    0.89    0.00      0.494  o       |        I       |        |     3.35
11.750    0.88    0.00      0.501  o       |        I       |        |     3.39
11.833    0.91    0.00      0.507  o       |        I       |        |     3.43
11.917    0.93    0.00      0.513  o       |        I       |        |     3.48
12.000    0.93    0.00      0.519  o       |        I       |        |     3.52
12.083    1.11    0.00      0.526  o       |        |   I   |        |     3.57
12.167    1.26    0.00      0.534  o       |        |     I |        |     3.62
12.250    1.29    0.00      0.543  o       |        |      I|        |     3.68
12.333    1.32    0.00      0.552  o       |        |      I|        |     3.74
12.417    1.34    0.00      0.561  o       |        |       I        |     3.80
12.500    1.35    0.00      0.571  o       |        |       I        |     3.87
12.583    1.40    0.00      0.580  o       |        |        |I      |     3.93
12.667    1.44    0.00      0.590  o       |        |        | I     |     4.00
12.750    1.45    0.00      0.600  o       |        |        | I     |     4.07
12.833    1.48    0.00      0.610  o       |        |        | I     |     4.13
12.917    1.50    0.00      0.620  o       |        |        |  I    |     4.20
13.000    1.50    0.00      0.630  o       |        |        |  I    |     4.27
13.083    1.63    0.00      0.641  o       |        |        |    I  |     4.34
13.167    1.74    0.00      0.653  o       |        |        |      I|     4.42
13.250    1.76    0.00      0.664  o       |        |        |      I|     4.50
13.333    1.76    0.00      0.677  o       |        |        |       I     4.58
13.417    1.76    0.00      0.689  o       |        |        |       I     4.67
13.500    1.76    0.00      0.701  o       |        |        |       I     4.75
13.583    1.48    0.00      0.712  o       |        |        | I     |     4.82
13.667    1.25    0.00      0.721  o       |        |     I  |       |     4.89
13.750    1.21    0.00      0.730  o       |        |    I   |       |     4.94
13.833    1.19    0.00      0.738  o       |        |    I   |       |     5.00
13.917    1.19    0.19      0.745  |  o     |        |    I   |       |     5.05
14.000    1.19    0.35      0.752  |     o  |        |    I   |       |     5.09
14.083    1.29    0.49      0.757  |       o|        |      I|       |     5.13
14.167    1.38    0.63      0.763  |        |  o     |       |I      |     5.17
14.250    1.39    0.75      0.768  |        |    o   |       |I      |     5.20
14.333    1.37    0.85      0.772  |        |      o|       I        |     5.23
14.417    1.35    0.93      0.775  |        |       o       I        |     5.25
14.500    1.35    1.00      0.778  |        |        | o    I        |     5.27
14.583    1.35    1.05      0.780  |        |        |  o   I        |     5.28
14.667    1.35    1.10      0.782  |        |        |  o   I        |     5.30
14.750    1.35    1.14      0.783  |        |        |   o  I        |     5.31
14.833    1.32    1.17      0.784  |        |        |    o I        |     5.32
14.917    1.30    1.19      0.785  |        |        |    o I|       |     5.32
15.000    1.30    1.21      0.786  |        |        |    o I|       |     5.33
15.083    1.27    1.22      0.786  |        |        |     oI|       |     5.33
15.167    1.25    1.23      0.787  |        |        |     o |       |     5.33
15.250    1.25    1.23      0.787  |        |        |     o |       |     5.33
15.333    1.22    1.23      0.787  |        |        |     o |       |     5.33
15.417    1.20    1.23      0.787  |        |        |    Io |       |     5.33
15.500    1.19    1.22      0.786  |        |        |    Io |       |     5.33
15.583    1.09    1.21      0.786  |        |        |  I o  |       |     5.33
15.667    1.01    1.18      0.785  |        |        | I  o  |       |     5.32
15.750    0.99    1.15      0.784  |        |        |I  o   |       |     5.31
15.833    0.98    1.13      0.783  |        |        |I  o   |       |     5.30
15.917    0.98    1.10      0.782  |        |        |I  o   |       |     5.30
16.000    0.98    1.09      0.781  |        |        |I o    |       |     5.29
16.083    0.60    1.04      0.779  |        | I      | o     |       |     5.28
16.167    0.29    0.94      0.775  |    I   |        |o      |       |     5.25
16.250    0.23    0.84      0.771  |   I    |       o|       |       |     5.22
16.333    0.21    0.74      0.767  |  I     |     o  |       |       |     5.20
16.417    0.21    0.65      0.764  |  I     |  o     |       |       |     5.18
16.500    0.21    0.58      0.761  |  I     | o      |       |       |     5.16
16.583    0.18    0.52      0.758  |  I     |o       |       |       |     5.14
16.667    0.16    0.46      0.756  | I     o|        |       |       |     5.12
16.750    0.16    0.42      0.754  | I    o |        |       |       |     5.11
16.833    0.16    0.37      0.753  | I   o  |        |       |       |     5.10
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16.917	0.16	0.34	0.751	I O				5.09
17.000	0.16	0.31	0.750	I O				5.08
17.083	0.21	0.29	0.749	I O				5.08
17.167	0.25	0.28	0.749	IO				5.07
17.250	0.26	0.28	0.749	IO				5.07
17.333	0.26	0.27	0.749	O				5.07
17.417	0.26	0.27	0.749	O				5.07
17.500	0.26	0.27	0.748	O				5.07
17.583	0.26	0.27	0.748	O				5.07
17.667	0.26	0.27	0.748	O				5.07
17.750	0.26	0.26	0.748	O				5.07
17.833	0.23	0.26	0.748	O				5.07
17.917	0.21	0.26	0.748	IO				5.07
18.000	0.21	0.25	0.748	IO				5.07
18.083	0.21	0.24	0.747	IO				5.06
18.167	0.21	0.24	0.747	IO				5.06
18.250	0.21	0.23	0.747	IO				5.06
18.333	0.21	0.23	0.747	IO				5.06
18.417	0.21	0.22	0.747	IO				5.06
18.500	0.21	0.22	0.747	IO				5.06
18.583	0.18	0.22	0.746	O				5.06
18.667	0.16	0.21	0.746	IO				5.06
18.750	0.16	0.20	0.746	IO				5.05
18.833	0.13	0.19	0.745	IO				5.05
18.917	0.11	0.18	0.745	I O				5.05
19.000	0.10	0.17	0.745	I O				5.04
19.083	0.13	0.16	0.744	O				5.04
19.167	0.15	0.16	0.744	O				5.04
19.250	0.15	0.16	0.744	O				5.04
19.333	0.18	0.16	0.744	OI				5.04
19.417	0.20	0.16	0.744	OI				5.04
19.500	0.21	0.17	0.745	O				5.04
19.583	0.18	0.17	0.745	O				5.05
19.667	0.16	0.17	0.745	IO				5.05
19.750	0.16	0.17	0.745	IO				5.04
19.833	0.13	0.17	0.744	IO				5.04
19.917	0.11	0.16	0.744	IO				5.04
20.000	0.10	0.15	0.744	IO				5.04
20.083	0.13	0.15	0.744	O				5.04
20.167	0.15	0.14	0.744	O				5.04
20.250	0.15	0.15	0.744	O				5.04
20.333	0.16	0.15	0.744	O				5.04
20.417	0.16	0.15	0.744	O				5.04
20.500	0.16	0.15	0.744	O				5.04
20.583	0.16	0.15	0.744	O				5.04
20.667	0.16	0.15	0.744	O				5.04
20.750	0.16	0.15	0.744	O				5.04
20.833	0.13	0.15	0.744	O				5.04
20.917	0.11	0.15	0.744	IO				5.04
21.000	0.10	0.14	0.743	IO				5.04
21.083	0.13	0.14	0.743	O				5.04
21.167	0.15	0.14	0.743	O				5.04
21.250	0.15	0.14	0.743	O				5.04
21.333	0.13	0.14	0.743	O				5.04
21.417	0.11	0.14	0.743	IO				5.04
21.500	0.10	0.13	0.743	IO				5.03
21.583	0.13	0.13	0.743	O				5.03
21.667	0.15	0.13	0.743	O				5.03
21.750	0.15	0.13	0.743	O				5.04
21.833	0.13	0.14	0.743	O				5.04
21.917	0.11	0.13	0.743	IO				5.03
22.000	0.10	0.13	0.743	IO				5.03
22.083	0.13	0.13	0.743	O				5.03
22.167	0.15	0.13	0.743	O				5.03
22.250	0.15	0.13	0.743	O				5.03
22.333	0.13	0.13	0.743	O				5.03
22.417	0.11	0.13	0.743	IO				5.03
22.500	0.10	0.13	0.743	IO				5.03
22.583	0.10	0.12	0.743	IO				5.03
22.667	0.10	0.12	0.743	IO				5.03
22.750	0.10	0.12	0.743	IO				5.03
22.833	0.10	0.12	0.742	IO				5.03
22.917	0.10	0.11	0.742	IO				5.03
23.000	0.10	0.11	0.742	IO				5.03
23.083	0.10	0.11	0.742	IO				5.03
23.167	0.10	0.11	0.742	O				5.03
23.250	0.10	0.11	0.742	O				5.03
23.333	0.10	0.11	0.742	O				5.03
23.417	0.10	0.11	0.742	O				5.03
23.500	0.10	0.11	0.742	O				5.03
23.583	0.10	0.11	0.742	O				5.03
23.667	0.10	0.11	0.742	O				5.03
23.750	0.10	0.11	0.742	O				5.03
23.833	0.10	0.11	0.742	O				5.03
23.917	0.10	0.10	0.742	O				5.03
24.000	0.10	0.10	0.742	O				5.03
24.083	0.05	0.10	0.742	IO				5.03

```
24.167    0.01    0.09      0.741  IO      |       |       |       |     5.02
24.250    0.00    0.08      0.741  IO      |       |       |       |     5.02
24.333    0.00    0.06      0.740  IO      |       |       |       |     5.02
      Remaining water in basin =    0.74 (Ac.Ft)
      ****************************HYDROGRAPH DATA****************************
                    Number of intervals =   292
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        1.231 (CFS)
                    Total volume =       0.330 (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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Study date: 06/09/22

Program License Serial Number 5006

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

From study/file name: PRO10110.rte
**********HYDROGRAPH DATA**********
Number of intervals = 15
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 15.042 (CFS)
Total volume = 0.465 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 15
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	3.8	7.52	11.28	15.04	Depth (Ft.)
0.083	1.22	0.00	0.004	O I					0.03
0.167	2.28	0.00	0.016	O I					0.11
0.250	2.70	0.00	0.033	O I					0.23
0.333	2.94	0.00	0.053	O I					0.36
0.417	3.23	0.00	0.074	O I					0.50
0.500	3.74	0.00	0.098	O I					0.66
0.583	4.36	0.00	0.126	O I					0.85
0.667	5.19	0.00	0.159	O I					1.07
0.750	7.11	0.00	0.201	O I					1.36
0.833	15.04	0.00	0.277	O				I	1.88
0.917	12.05	0.00	0.371	O			I		2.51
1.000	5.13	0.00	0.430	O I					2.91
1.083	2.13	0.00	0.455	O I					3.08
1.167	0.34	0.00	0.463	O					3.14
1.250	0.08	0.00	0.465	O					3.15
1.333	0.00	0.00	0.465	O					3.15

Remaining water in basin = 0.46 (Ac.Ft)

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**************************HYDROGRAPH DATA**************************
               Number of intervals =    16
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.003 (CFS)
               Total volume =       0.000 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO10310.rte
**********HYDROGRAPH DATA**********
Number of intervals = 39
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 7.794 (CFS)
Total volume = 0.631 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 39
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 1.9 3.90 5.85 7.79	Depth (Ft.)
0.083	0.55	0.00	0.002	O I	0.01
0.167	1.02	0.00	0.007	O I	0.05
0.250	1.02	0.00	0.014	O I	0.10
0.333	1.15	0.00	0.022	O I	0.15
0.417	1.28	0.00	0.030	O I	0.20
0.500	1.43	0.00	0.039	O I	0.27
0.583	1.41	0.00	0.049	O I	0.33
0.667	1.45	0.00	0.059	O I	0.40
0.750	1.55	0.00	0.069	O I	0.47
0.833	1.43	0.00	0.080	O I	0.54
0.917	1.38	0.00	0.089	O I	0.60
1.000	1.48	0.00	0.099	O I	0.67
1.083	1.72	0.00	0.110	O I	0.74
1.167	1.88	0.00	0.123	O I	0.83
1.250	1.91	0.00	0.136	O I	0.92
1.333	1.83	0.00	0.148	O I	1.00
1.417	2.02	0.00	0.162	O I	1.09
1.500	2.26	0.00	0.176	O I	1.19
1.583	2.20	0.00	0.192	O I	1.30
1.667	2.24	0.00	0.207	O I	1.40

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1.750    2.59    0.00      0.224  O       | I     |       |       |     1.51
1.833    2.73    0.00      0.242  O       |  I    |       |       |     1.64
1.917    2.62    0.00      0.260  O       | I     |       |       |     1.76
2.000    2.59    0.00      0.278  O       | I     |       |       |     1.89
2.083    2.65    0.00      0.296  O       | I     |       |       |     2.01
2.167    3.22    0.00      0.316  O       |    I  |       |       |     2.15
2.250    4.13    0.00      0.342  O       |       I       |       |     2.32
2.333    3.78    0.00      0.369  O       |      I|       |       |     2.50
2.417    5.05    0.00      0.399  O       |       |   I   |       |     2.71
2.500    6.79    0.00      0.440  O       |       |       |  I    |     2.98
2.583    7.79    0.00      0.490  O       |       |       |       I     3.32
2.667    7.05    0.00      0.541  O       |       |       |   I   |     3.67
2.750    4.05    0.00      0.580  O       |       I       |       |     3.93
2.833    2.14    0.00      0.601  O       I       |       |       |     4.07
2.917    1.69    0.00      0.614  O     I |       |       |       |     4.16
3.000    1.06    0.00      0.624  O   I   |       |       |       |     4.23
3.083    0.37    0.00      0.628  OI      |       |       |       |     4.26
3.167    0.08    0.00      0.630  O       |       |       |       |     4.27
3.250    0.01    0.00      0.630  O       |       |       |       |     4.27
3.333    0.00    0.00      0.630  O       |       |       |       |     4.27

Remaining water in basin =    0.63 (Ac.Ft)

*****************************HYDROGRAPH DATA*****************************
               Number of intervals =    40
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        0.004 (CFS)
               Total volume =       0.001 (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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Study date: 06/09/22

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

From study/file name: PRO10610.rte
**********HYDROGRAPH DATA**********
Number of intervals = 75
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 6.826 (CFS)
Total volume = 0.824 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 75
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	1.7	3.41	5.12	6.83	Depth (Ft.)
0.083	0.28	0.00	0.001	OI					0.01
0.167	0.58	0.00	0.004	O I					0.03
0.250	0.67	0.00	0.008	O I					0.06
0.333	0.69	0.00	0.013	O I					0.09
0.417	0.70	0.00	0.018	O I					0.12
0.500	0.75	0.00	0.023	O I					0.15
0.583	0.80	0.00	0.028	O I					0.19
0.667	0.81	0.00	0.034	O I					0.23
0.750	0.81	0.00	0.039	O I					0.27
0.833	0.81	0.00	0.045	O I					0.30
0.917	0.81	0.00	0.050	O I					0.34
1.000	0.87	0.00	0.056	O I					0.38
1.083	0.92	0.00	0.062	O I					0.42
1.167	0.93	0.00	0.069	O I					0.46
1.250	0.93	0.00	0.075	O I					0.51
1.333	0.93	0.00	0.082	O I					0.55
1.417	0.93	0.00	0.088	O I					0.59
1.500	0.93	0.00	0.094	O I					0.64
1.583	0.93	0.00	0.101	O I					0.68
1.667	0.93	0.00	0.107	O I					0.72

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1.750    0.93    0.00      0.114  O   I   |        |        |        |     0.77
1.833    0.93    0.00      0.120  O   I   |        |        |        |     0.81
1.917    0.93    0.00      0.126  O   I   |        |        |        |     0.85
2.000    0.99    0.00      0.133  O   I   |        |        |        |     0.90
2.083    0.98    0.00      0.140  O   I   |        |        |        |     0.94
2.167    1.00    0.00      0.147  O   I   |        |        |        |     0.99
2.250    1.04    0.00      0.154  O   I   |        |        |        |     1.04
2.333    1.04    0.00      0.161  O   I   |        |        |        |     1.09
2.417    1.05    0.00      0.168  O   I   |        |        |        |     1.14
2.500    1.05    0.00      0.175  O   I   |        |        |        |     1.18
2.583    1.05    0.00      0.182  O   I   |        |        |        |     1.23
2.667    1.05    0.00      0.189  O   I   |        |        |        |     1.28
2.750    1.10    0.00      0.197  O    I  |        |        |        |     1.33
2.833    1.15    0.00      0.205  O    I  |        |        |        |     1.39
2.917    1.16    0.00      0.213  O    I  |        |        |        |     1.44
3.000    1.16    0.00      0.221  O    I  |        |        |        |     1.49
3.083    1.16    0.00      0.229  O    I  |        |        |        |     1.55
3.167    1.22    0.00      0.237  O    I  |        |        |        |     1.60
3.250    1.27    0.00      0.245  O    I  |        |        |        |     1.66
3.333    1.28    0.00      0.254  O    I  |        |        |        |     1.72
3.417    1.34    0.00      0.263  O     I |        |        |        |     1.78
3.500    1.44    0.00      0.273  O     I |        |        |        |     1.85
3.583    1.55    0.00      0.283  O      I|        |        |        |     1.92
3.667    1.61    0.00      0.294  O      I|        |        |        |     1.99
3.750    1.68    0.00      0.305  O      I|        |        |        |     2.07
3.833    1.73    0.00      0.317  O       I        |        |        |     2.15
3.917    1.80    0.00      0.329  O       I        |        |        |     2.23
4.000    1.85    0.00      0.341  O       I        |        |        |     2.31
4.083    1.91    0.00      0.354  O       I        |        |        |     2.40
4.167    2.02    0.00      0.368  O       |I       |        |        |     2.49
4.250    2.13    0.00      0.382  O       | I      |        |        |     2.59
4.333    2.25    0.00      0.397  O       | I      |        |        |     2.69
4.417    2.37    0.00      0.413  O       |  I     |        |        |     2.80
4.500    2.43    0.00      0.430  O       |  I     |        |        |     2.91
4.583    2.50    0.00      0.447  O       |  I     |        |        |     3.02
4.667    2.60    0.00      0.464  O       |   I    |        |        |     3.14
4.750    2.72    0.00      0.482  O       |   I    |        |        |     3.27
4.833    2.78    0.00      0.501  O       |    I   |        |        |     3.40
4.917    2.84    0.00      0.521  O       |    I   |        |        |     3.53
5.000    2.95    0.00      0.541  O       |    I   |        |        |     3.66
5.083    3.35    0.00      0.562  O       |      I |        |        |     3.81
5.167    4.02    0.00      0.588  O       |        | I      |        |     3.98
5.250    4.63    0.00      0.617  O       |        |    I   |        |     4.19
5.333    5.13    0.00      0.651  O       |        |       I|        |     4.41
5.417    5.77    0.00      0.689  O       |        |        |  I     |     4.67
5.500    6.83    0.00      0.732  O       |        |        |       I|     4.96
5.583    4.82    0.79      0.769  |  O     |        |     I  |        |     5.21
5.667    2.15    1.22      0.786  |    O   | I      |        |        |     5.33
5.750    1.13    1.29      0.789  |    IO  |        |        |        |     5.35
5.833    0.71    1.23      0.787  |  I O   |        |        |        |     5.33
5.917    0.49    1.13      0.783  | I  O   |        |        |        |     5.30
6.000    0.32    1.01      0.778  |I  O    |        |        |        |     5.27
6.083    0.14    0.89      0.773  I   O    |        |        |        |     5.24
6.167    0.03    0.76      0.768  I  O     |        |        |        |     5.20
6.250    0.01    0.64      0.763  I  O     |        |        |        |     5.17
6.333    0.00    0.54      0.759  I O      |        |        |        |     5.14
6.417    0.00    0.45      0.756  I O      |        |        |        |     5.12
6.500    0.00    0.38      0.753  IO       |        |        |        |     5.10
6.583    0.00    0.32      0.751  IO       |        |        |        |     5.09
6.667    0.00    0.27      0.749  IO       |        |        |        |     5.07
6.750    0.00    0.23      0.747  IO       |        |        |        |     5.06
6.833    0.00    0.19      0.745  O        |        |        |        |     5.05
6.917    0.00    0.16      0.744  O        |        |        |        |     5.04
7.000    0.00    0.13      0.743  O        |        |        |        |     5.04
7.083    0.00    0.11      0.742  O        |        |        |        |     5.03
7.167    0.00    0.10      0.742  O        |        |        |        |     5.02

 Remaining water in basin =    0.74 (Ac.Ft)

 ****************************HYDROGRAPH DATA****************************
               Number of intervals =    86
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        1.286 (CFS)
               Total volume =       0.082 (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
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Study date: 06/09/22

Program License Serial Number 5006

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

From study/file name: PRO102410.rte
**********HYDROGRAPH DATA**********
Number of intervals = 291
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 2.108 (CFS)
Total volume = 1.281 (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
****

++++++++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 291
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

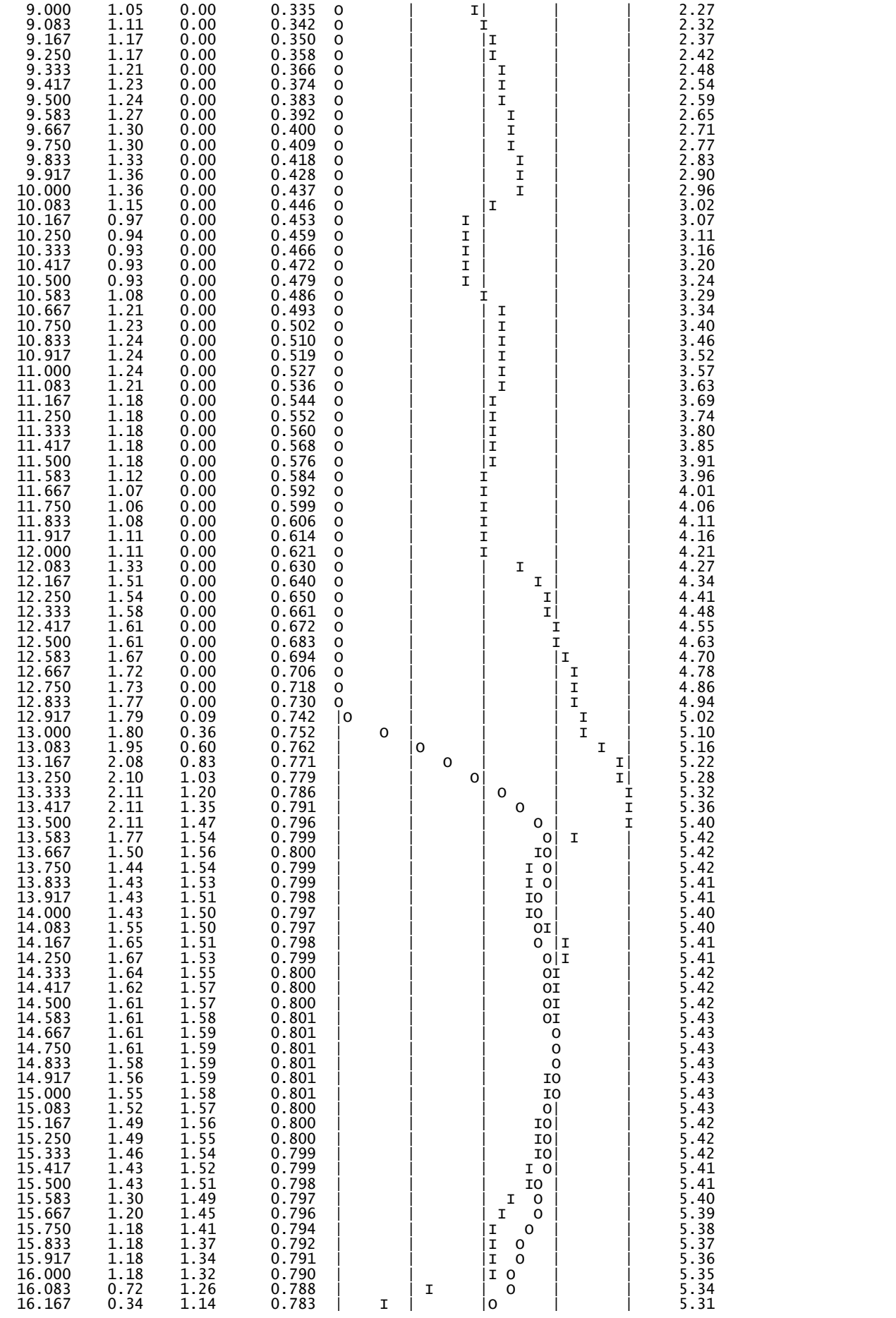
Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.5	1.05	1.58	2.11	Depth (Ft.)
0.083	0.06	0.00	0.000	O	|	|	|	|	0.00
0.167	0.11	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.12	0.00	0.002	OI	|	|	|	|	0.01
0.333	0.15	0.00	0.003	O I	|	|	|	|	0.02
0.417	0.18	0.00	0.004	O I	|	|	|	|	0.02
0.500	0.18	0.00	0.005	O I	|	|	|	|	0.03
0.583	0.19	0.00	0.006	O I	|	|	|	|	0.04
0.667	0.19	0.00	0.008	O I	|	|	|	|	0.05
0.750	0.19	0.00	0.009	O I	|	|	|	|	0.06
0.833	0.22	0.00	0.010	O I	|	|	|	|	0.07
0.917	0.24	0.00	0.012	O I	|	|	|	|	0.08
1.000	0.25	0.00	0.013	O I	|	|	|	|	0.09
1.083	0.22	0.00	0.015	O I	|	|	|	|	0.10
1.167	0.19	0.00	0.016	O I	|	|	|	|	0.11
1.250	0.19	0.00	0.018	O I	|	|	|	|	0.12
1.333	0.19	0.00	0.019	O I	|	|	|	|	0.13
1.417	0.19	0.00	0.020	O I	|	|	|	|	0.14
1.500	0.19	0.00	0.022	O I	|	|	|	|	0.15
1.583	0.19	0.00	0.023	O I	|	|	|	|	0.15
1.667	0.19	0.00	0.024	O I	|	|	|	|	0.16

1.750	0.19	0.00	0.025	o I	|	|	|	|	0.17
1.833	0.22	0.00	0.027	o I	|	|	|	|	0.18
1.917	0.24	0.00	0.028	o I	|	|	|	|	0.19
2.000	0.25	0.00	0.030	o I	|	|	|	|	0.20
2.083	0.25	0.00	0.032	o I	|	|	|	|	0.21
2.167	0.25	0.00	0.033	o I	|	|	|	|	0.23
2.250	0.25	0.00	0.035	o I	|	|	|	|	0.24
2.333	0.25	0.00	0.037	o I	|	|	|	|	0.25
2.417	0.25	0.00	0.039	o I	|	|	|	|	0.26
2.500	0.25	0.00	0.040	o I	|	|	|	|	0.27
2.583	0.28	0.00	0.042	o I	|	|	|	|	0.28
2.667	0.30	0.00	0.044	o I	|	|	|	|	0.30
2.750	0.31	0.00	0.046	o I	|	|	|	|	0.31
2.833	0.31	0.00	0.048	o I	|	|	|	|	0.33
2.917	0.31	0.00	0.050	o I	|	|	|	|	0.34
3.000	0.31	0.00	0.053	o I	|	|	|	|	0.36
3.083	0.31	0.00	0.055	o I	|	|	|	|	0.37
3.167	0.31	0.00	0.057	o I	|	|	|	|	0.38
3.250	0.31	0.00	0.059	o I	|	|	|	|	0.40
3.333	0.31	0.00	0.061	o I	|	|	|	|	0.41
3.417	0.31	0.00	0.063	o I	|	|	|	|	0.43
3.500	0.31	0.00	0.065	o I	|	|	|	|	0.44
3.583	0.31	0.00	0.068	o I	|	|	|	|	0.46
3.667	0.31	0.00	0.070	o I	|	|	|	|	0.47
3.750	0.31	0.00	0.072	o I	|	|	|	|	0.49
3.833	0.34	0.00	0.074	o I	|	|	|	|	0.50
3.917	0.37	0.00	0.076	o I	|	|	|	|	0.52
4.000	0.37	0.00	0.079	o I	|	|	|	|	0.53
4.083	0.37	0.00	0.082	o I	|	|	|	|	0.55
4.167	0.37	0.00	0.084	o I	|	|	|	|	0.57
4.250	0.37	0.00	0.087	o I	|	|	|	|	0.59
4.333	0.40	0.00	0.089	o I	|	|	|	|	0.60
4.417	0.43	0.00	0.092	o I	|	|	|	|	0.62
4.500	0.43	0.00	0.095	o I	|	|	|	|	0.64
4.583	0.43	0.00	0.098	o I	|	|	|	|	0.66
4.667	0.43	0.00	0.101	o I	|	|	|	|	0.68
4.750	0.43	0.00	0.104	o I	|	|	|	|	0.70
4.833	0.46	0.00	0.107	o I	|	|	|	|	0.72
4.917	0.49	0.00	0.110	o I	|	|	|	|	0.75
5.000	0.49	0.00	0.114	o I	|	|	|	|	0.77
5.083	0.44	0.00	0.117	o I	|	|	|	|	0.79
5.167	0.38	0.00	0.120	o I	|	|	|	|	0.81
5.250	0.38	0.00	0.122	o I	|	|	|	|	0.83
5.333	0.40	0.00	0.125	o I	|	|	|	|	0.85
5.417	0.43	0.00	0.128	o I	|	|	|	|	0.86
5.500	0.43	0.00	0.131	o I	|	|	|	|	0.88
5.583	0.46	0.00	0.134	o I	|	|	|	|	0.91
5.667	0.49	0.00	0.137	o I	|	|	|	|	0.93
5.750	0.49	0.00	0.141	o I	|	|	|	|	0.95
5.833	0.50	0.00	0.144	o I	|	|	|	|	0.97
5.917	0.50	0.00	0.148	o I	|	|	|	|	1.00
6.000	0.50	0.00	0.151	o I	|	|	|	|	1.02
6.083	0.53	0.00	0.154	o I	|	|	|	|	1.04
6.167	0.55	0.00	0.158	o I	|	|	|	|	1.07
6.250	0.56	0.00	0.162	o I	|	|	|	|	1.09
6.333	0.56	0.00	0.166	o I	|	|	|	|	1.12
6.417	0.56	0.00	0.170	o I	|	|	|	|	1.15
6.500	0.56	0.00	0.173	o I	|	|	|	|	1.17
6.583	0.59	0.00	0.177	o I	|	|	|	|	1.20
6.667	0.61	0.00	0.182	o I	|	|	|	|	1.23
6.750	0.62	0.00	0.186	o I	|	|	|	|	1.26
6.833	0.62	0.00	0.190	o I	|	|	|	|	1.29
6.917	0.62	0.00	0.194	o I	|	|	|	|	1.31
7.000	0.62	0.00	0.199	o I	|	|	|	|	1.34
7.083	0.62	0.00	0.203	o I	|	|	|	|	1.37
7.167	0.62	0.00	0.207	o I	|	|	|	|	1.40
7.250	0.62	0.00	0.211	o I	|	|	|	|	1.43
7.333	0.65	0.00	0.216	o I	|	|	|	|	1.46
7.417	0.68	0.00	0.220	o I	|	|	|	|	1.49
7.500	0.68	0.00	0.225	o I	|	|	|	|	1.52
7.583	0.71	0.00	0.230	o I	|	|	|	|	1.56
7.667	0.74	0.00	0.235	o I	|	|	|	|	1.59
7.750	0.74	0.00	0.240	o I	|	|	|	|	1.62
7.833	0.77	0.00	0.245	o I	|	|	|	|	1.66
7.917	0.80	0.00	0.250	o I	|	|	|	|	1.70
8.000	0.80	0.00	0.256	o I	|	|	|	|	1.73
8.083	0.87	0.00	0.262	o I	|	|	|	|	1.77
8.167	0.92	0.00	0.268	o I	|	|	|	|	1.81
8.250	0.93	0.00	0.274	o I	|	|	|	|	1.86
8.333	0.93	0.00	0.281	o I	|	|	|	|	1.90
8.417	0.93	0.00	0.287	o I	|	|	|	|	1.94
8.500	0.93	0.00	0.293	o I	|	|	|	|	1.99
8.583	0.96	0.00	0.300	o I	|	|	|	|	2.03
8.667	0.99	0.00	0.306	o I	|	|	|	|	2.08
8.750	0.99	0.00	0.313	o I	|	|	|	|	2.12
8.833	1.02	0.00	0.320	o I	|	|	|	|	2.17
8.917	1.05	0.00	0.327	o I	|	|	|	|	2.22



9.000	1.05	0.00	0.335	O		I			2.27
9.083	1.11	0.00	0.342	O		I			2.32
9.167	1.17	0.00	0.350	O		I			2.37
9.250	1.17	0.00	0.358	O		I			2.42
9.333	1.21	0.00	0.366	O		I			2.48
9.417	1.23	0.00	0.374	O		I			2.54
9.500	1.24	0.00	0.383	O		I			2.59
9.583	1.27	0.00	0.392	O		I			2.65
9.667	1.30	0.00	0.400	O		I			2.71
9.750	1.30	0.00	0.409	O		I			2.77
9.833	1.33	0.00	0.418	O		I			2.83
9.917	1.36	0.00	0.428	O		I			2.90
10.000	1.36	0.00	0.437	O		I			2.96
10.083	1.15	0.00	0.446	O		I			3.02
10.167	0.97	0.00	0.453	O	I				3.07
10.250	0.94	0.00	0.459	O	I				3.11
10.333	0.93	0.00	0.466	O	I				3.16
10.417	0.93	0.00	0.472	O	I				3.20
10.500	0.93	0.00	0.479	O	I				3.24
10.583	1.08	0.00	0.486	O	I				3.29
10.667	1.21	0.00	0.493	O	I				3.34
10.750	1.23	0.00	0.502	O	I				3.40
10.833	1.24	0.00	0.510	O	I				3.46
10.917	1.24	0.00	0.519	O	I				3.52
11.000	1.24	0.00	0.527	O	I				3.57
11.083	1.21	0.00	0.536	O	I				3.63
11.167	1.18	0.00	0.544	O	I				3.69
11.250	1.18	0.00	0.552	O	I				3.74
11.333	1.18	0.00	0.560	O	I				3.80
11.417	1.18	0.00	0.568	O	I				3.85
11.500	1.18	0.00	0.576	O	I				3.91
11.583	1.12	0.00	0.584	O	I				3.96
11.667	1.07	0.00	0.592	O	I				4.01
11.750	1.06	0.00	0.599	O	I				4.06
11.833	1.08	0.00	0.606	O	I				4.11
11.917	1.11	0.00	0.614	O	I				4.16
12.000	1.11	0.00	0.621	O	I				4.21
12.083	1.33	0.00	0.630	O	I				4.27
12.167	1.51	0.00	0.640	O	I				4.34
12.250	1.54	0.00	0.650	O	I				4.41
12.333	1.58	0.00	0.661	O	I				4.48
12.417	1.61	0.00	0.672	O	I				4.55
12.500	1.61	0.00	0.683	O	I				4.63
12.583	1.67	0.00	0.694	O	I				4.70
12.667	1.72	0.00	0.706	O	I				4.78
12.750	1.73	0.00	0.718	O	I				4.86
12.833	1.77	0.00	0.730	O	I				4.94
12.917	1.79	0.09	0.742	O	I				5.02
13.000	1.80	0.36	0.752	O	I				5.10
13.083	1.95	0.60	0.762	O	I				5.16
13.167	2.08	0.83	0.771	O	I			I	5.22
13.250	2.10	1.03	0.779	O	I			I	5.28
13.333	2.11	1.20	0.786	O	I			I	5.32
13.417	2.11	1.35	0.791	O	I			I	5.36
13.500	2.11	1.47	0.796	O	I			I	5.40
13.583	1.77	1.54	0.799	O	I		I		5.42
13.667	1.50	1.56	0.800	O	I				5.42
13.750	1.44	1.54	0.799	O	I				5.42
13.833	1.43	1.53	0.799	O	I				5.41
13.917	1.43	1.51	0.798	O	I				5.41
14.000	1.43	1.50	0.797	O	I				5.40
14.083	1.55	1.50	0.797	O	I				5.40
14.167	1.65	1.51	0.798	O	I		I		5.41
14.250	1.67	1.53	0.799	O	I		I		5.41
14.333	1.64	1.55	0.800	O	I				5.42
14.417	1.62	1.57	0.800	O	I				5.42
14.500	1.61	1.57	0.800	O	I				5.42
14.583	1.61	1.58	0.801	O	I				5.43
14.667	1.61	1.59	0.801	O	I				5.43
14.750	1.61	1.59	0.801	O	I				5.43
14.833	1.58	1.59	0.801	O	I				5.43
14.917	1.56	1.59	0.801	O	I				5.43
15.000	1.55	1.58	0.801	O	I				5.43
15.083	1.52	1.57	0.800	O	I				5.43
15.167	1.49	1.56	0.800	O	I				5.42
15.250	1.49	1.55	0.800	O	I				5.42
15.333	1.46	1.54	0.799	O	I				5.42
15.417	1.43	1.52	0.799	O	I				5.41
15.500	1.43	1.51	0.798	O	I				5.41
15.583	1.30	1.49	0.797	O	I				5.40
15.667	1.20	1.45	0.796	O	I				5.39
15.750	1.18	1.41	0.794	O	I				5.38
15.833	1.18	1.37	0.792	O	I				5.37
15.917	1.18	1.34	0.791	O	I				5.36
16.000	1.18	1.32	0.790	O	I				5.35
16.083	0.72	1.26	0.788	O	I				5.34
16.167	0.34	1.14	0.783	O	I				5.31

16.250	0.27	1.01	0.778	| I | O|	|	|	5.27
16.333	0.25	0.89	0.773	| I | O |	|	|	5.24
16.417	0.25	0.79	0.769	| I | O |	|	|	5.21
16.500	0.25	0.70	0.766	| I | O |	|	|	5.19
16.583	0.22	0.63	0.763	| I |O |	|	|	5.17
16.667	0.19	0.56	0.760	| I O |	|	|	5.15
16.750	0.19	0.50	0.758	| I O|	|	|	5.13
16.833	0.19	0.45	0.756	| I O |	|	|	5.12
16.917	0.19	0.41	0.754	| I O |	|	|	5.11
17.000	0.19	0.37	0.753	| I O |	|	|	5.10
17.083	0.25	0.35	0.752	| I O |	|	|	5.09
17.167	0.30	0.34	0.751	| IO |	|	|	5.09
17.250	0.31	0.33	0.751	| IO |	|	|	5.09
17.333	0.31	0.33	0.751	| O |	|	|	5.09
17.417	0.31	0.32	0.751	| O |	|	|	5.09
17.500	0.31	0.32	0.751	| O |	|	|	5.09
17.583	0.31	0.32	0.751	| O |	|	|	5.09
17.667	0.31	0.32	0.750	| O |	|	|	5.08
17.750	0.31	0.32	0.750	| O |	|	|	5.08
17.833	0.28	0.31	0.750	| O |	|	|	5.08
17.917	0.25	0.31	0.750	| IO |	|	|	5.08
18.000	0.25	0.30	0.750	| IO |	|	|	5.08
18.083	0.25	0.29	0.749	| IO |	|	|	5.08
18.167	0.25	0.28	0.749	| IO |	|	|	5.08
18.250	0.25	0.28	0.749	| IO |	|	|	5.07
18.333	0.25	0.27	0.749	| IO |	|	|	5.07
18.417	0.25	0.27	0.749	| IO |	|	|	5.07
18.500	0.25	0.27	0.748	| IO |	|	|	5.07
18.583	0.22	0.26	0.748	| O |	|	|	5.07
18.667	0.19	0.25	0.748	| IO |	|	|	5.07
18.750	0.19	0.24	0.747	| IO |	|	|	5.06
18.833	0.16	0.23	0.747	| IO |	|	|	5.06
18.917	0.13	0.22	0.746	|I O |	|	|	5.06
19.000	0.13	0.20	0.746	|I O |	|	|	5.05
19.083	0.15	0.19	0.745	| O |	|	|	5.05
19.167	0.18	0.19	0.745	| O |	|	|	5.05
19.250	0.18	0.19	0.745	| O |	|	|	5.05
19.333	0.22	0.19	0.745	| OI |	|	|	5.05
19.417	0.24	0.20	0.746	| OI |	|	|	5.05
19.500	0.25	0.20	0.746	| O |	|	|	5.05
19.583	0.22	0.21	0.746	| O |	|	|	5.05
19.667	0.19	0.21	0.746	| IO |	|	|	5.05
19.750	0.19	0.20	0.746	| IO |	|	|	5.05
19.833	0.16	0.20	0.746	| IO |	|	|	5.05
19.917	0.13	0.19	0.745	|IO |	|	|	5.05
20.000	0.13	0.18	0.745	|IO |	|	|	5.05
20.083	0.15	0.17	0.745	| O |	|	|	5.05
20.167	0.18	0.17	0.745	| O |	|	|	5.05
20.250	0.18	0.17	0.745	| O |	|	|	5.05
20.333	0.19	0.18	0.745	| O |	|	|	5.05
20.417	0.19	0.18	0.745	| O |	|	|	5.05
20.500	0.19	0.18	0.745	| O |	|	|	5.05
20.583	0.19	0.18	0.745	| O |	|	|	5.05
20.667	0.19	0.18	0.745	| O |	|	|	5.05
20.750	0.19	0.18	0.745	| O |	|	|	5.05
20.833	0.16	0.18	0.745	| O |	|	|	5.05
20.917	0.13	0.17	0.745	|IO |	|	|	5.05
21.000	0.13	0.17	0.744	|IO |	|	|	5.04
21.083	0.15	0.16	0.744	| O |	|	|	5.04
21.167	0.18	0.16	0.744	| O |	|	|	5.04
21.250	0.18	0.17	0.744	| O |	|	|	5.04
21.333	0.16	0.17	0.744	| O |	|	|	5.04
21.417	0.13	0.16	0.744	|IO |	|	|	5.04
21.500	0.13	0.16	0.744	|IO |	|	|	5.04
21.583	0.15	0.15	0.744	| O |	|	|	5.04
21.667	0.18	0.16	0.744	| O |	|	|	5.04
21.750	0.18	0.16	0.744	| O |	|	|	5.04
21.833	0.16	0.16	0.744	| O |	|	|	5.04
21.917	0.13	0.16	0.744	|IO |	|	|	5.04
22.000	0.13	0.15	0.744	|IO |	|	|	5.04
22.083	0.15	0.15	0.744	| O |	|	|	5.04
22.167	0.18	0.15	0.744	| O |	|	|	5.04
22.250	0.18	0.16	0.744	| O |	|	|	5.04
22.333	0.16	0.16	0.744	| O |	|	|	5.04
22.417	0.13	0.16	0.744	|IO |	|	|	5.04
22.500	0.13	0.15	0.744	|IO |	|	|	5.04
22.583	0.12	0.15	0.744	|IO |	|	|	5.04
22.667	0.12	0.14	0.744	|IO |	|	|	5.04
22.750	0.12	0.14	0.743	|IO |	|	|	5.04
22.833	0.12	0.14	0.743	|IO |	|	|	5.04
22.917	0.12	0.14	0.743	|IO |	|	|	5.04
23.000	0.12	0.13	0.743	|IO |	|	|	5.04
23.083	0.12	0.13	0.743	|IO |	|	|	5.03
23.167	0.12	0.13	0.743	|O |	|	|	5.03
23.250	0.12	0.13	0.743	|O |	|	|	5.03
23.333	0.12	0.13	0.743	|O |	|	|	5.03
23.417	0.12	0.13	0.743	|O |	|	|	5.03

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23.500    0.12    0.13      0.743  |O      |       |       |       |     5.03
23.583    0.12    0.13      0.743  |O      |       |       |       |     5.03
23.667    0.12    0.13      0.743  |O      |       |       |       |     5.03
23.750    0.12    0.13      0.743  |O      |       |       |       |     5.03
23.833    0.12    0.13      0.743  |O      |       |       |       |     5.03
23.917    0.12    0.13      0.743  |O      |       |       |       |     5.03
24.000    0.12    0.13      0.743  |O      |       |       |       |     5.03
24.083    0.06    0.12      0.743  IO      |       |       |       |     5.03
24.167    0.01    0.11      0.742  IO      |       |       |       |     5.03
24.250    0.00    0.09      0.741  IO      |       |       |       |     5.02
24.333    0.00    0.08      0.741  IO      |       |       |       |     5.02

 Remaining water in basin =    0.74 (Ac.Ft)


 ****************************HYDROGRAPH DATA****************************
               Number of intervals =   292
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        1.591 (CFS)
               Total volume =       0.541 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO1001100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 15
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 24.242 (CFS)
Total volume = 0.774 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 15
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 6.1 12.12 18.18 24.24	Depth (Ft.)
0.083	2.03	0.00	0.007	O I	0.05
0.167	3.79	0.00	0.027	O I	0.18
0.250	4.58	0.00	0.056	O I	0.38
0.333	5.06	0.00	0.089	O I	0.60
0.417	5.63	0.00	0.126	O I	0.85
0.500	6.50	0.00	0.168	O I	1.13
0.583	7.49	0.00	0.216	O I	1.46
0.667	8.79	0.00	0.272	O I	1.84
0.750	11.81	0.00	0.343	O I	2.32
0.833	24.24	0.00	0.467	O I	3.16
0.917	19.55	0.00	0.618	O I	4.19
1.000	8.62	0.00	0.715	O I	4.84
1.083	3.60	0.44	0.755	O I	5.12
1.167	0.58	0.70	0.766	O	5.19
1.250	0.13	0.65	0.763	O	5.17
1.333	0.00	0.55	0.760	O	5.15
1.417	0.00	0.47	0.756	O	5.12
1.500	0.00	0.39	0.753	O	5.10
1.583	0.00	0.33	0.751	O	5.09
1.667	0.00	0.28	0.749	O	5.07

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1.750    0.00    0.23      0.747  O       |       |       |       |     5.06
1.833    0.00    0.20      0.746  O       |       |       |       |     5.05
1.917    0.00    0.16      0.744  O       |       |       |       |     5.04
2.000    0.00    0.14      0.743  O       |       |       |       |     5.04
2.083    0.00    0.12      0.742  O       |       |       |       |     5.03
2.167    0.00    0.10      0.742  O       |       |       |       |     5.03

      Remaining water in basin =    0.74 (Ac.Ft)


      ****************************HYDROGRAPH DATA****************************
                    Number of intervals =    26
                    Time interval =    5.0 (Min.)
                    Maximum/Peak flow rate =        0.700 (CFS)
                    Total volume =       0.033 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO1003100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 39
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 12.140 (CFS)
Total volume = 0.973 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 39
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	3.0	6.07	9.10	12.14	Depth (Ft.)
0.083	0.82	0.00	0.003	O I	|	|	|	|	0.02
0.167	1.51	0.00	0.011	O I	|	|	|	|	0.07
0.250	1.51	0.00	0.021	O I	|	|	|	|	0.14
0.333	1.70	0.00	0.032	O I	|	|	|	|	0.22
0.417	1.90	0.00	0.045	O I	|	|	|	|	0.30
0.500	2.12	0.00	0.059	O I	|	|	|	|	0.40
0.583	2.10	0.00	0.073	O I	|	|	|	|	0.49
0.667	2.16	0.00	0.088	O I	|	|	|	|	0.59
0.750	2.30	0.00	0.103	O I	|	|	|	|	0.70
0.833	2.13	0.00	0.118	O I	|	|	|	|	0.80
0.917	2.04	0.00	0.133	O I	|	|	|	|	0.90
1.000	2.19	0.00	0.147	O I	|	|	|	|	1.00
1.083	2.55	0.00	0.164	O I	|	|	|	|	1.11
1.167	2.79	0.00	0.182	O I	|	|	|	|	1.23
1.250	2.83	0.00	0.201	O I	|	|	|	|	1.36
1.333	2.72	0.00	0.221	O I	|	|	|	|	1.49
1.417	3.01	0.00	0.240	O I	|	|	|	|	1.63
1.500	3.40	0.00	0.262	O I	|	|	|	|	1.78
1.583	3.30	0.00	0.285	O I	|	|	|	|	1.93
1.667	3.37	0.00	0.308	O I	|	|	|	|	2.09

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1.750    4.04    0.00      0.334  O       | I     |       |       |     2.26
1.833    4.32    0.00      0.363  O       |  I    |       |       |     2.46
1.917    4.10    0.00      0.392  O       | I     |       |       |     2.65
2.000    4.04    0.00      0.420  O       | I     |       |       |     2.84
2.083    4.17    0.00      0.448  O       | I     |       |       |     3.03
2.167    5.18    0.00      0.480  O       |    I  |       |       |     3.25
2.250    6.67    0.00      0.521  O       |      |I      |       |     3.53
2.333    6.11    0.00      0.565  O       |       I       |       |     3.83
2.417    8.01    0.00      0.613  O       |         |    I  |       |     4.16
2.500   10.65    0.00      0.678  O       |         |       |   I   |     4.59
2.583   12.14    0.42      0.755  |O      |         |       |       I     5.11
2.667   11.03    2.20      0.825  |    O  |         |       |    I  |     5.59
2.750    6.31    3.23      0.866  |       O       I       |       |     5.87
2.833    3.23    3.48      0.876  |       IO      |       |       |     5.94
2.917    2.53    3.38      0.872  |     I O       |       |       |     5.91
3.000    1.58    3.17      0.864  |   I   O       |       |       |     5.86
3.083    0.55    2.83      0.851  |I     O|       |       |       |     5.77
3.167    0.12    2.44      0.835  I     O |       |       |       |     5.66
3.250    0.02    2.06      0.820  I    O  |       |       |       |     5.56
3.333    0.00    1.73      0.807  I   O   |       |       |       |     5.47
3.417    0.00    1.46      0.796  I  O    |       |       |       |     5.39
3.500    0.00    1.23      0.787  I  O    |       |       |       |     5.33
3.583    0.00    1.03      0.779  I O     |       |       |       |     5.28
3.667    0.00    0.87      0.772  I O     |       |       |       |     5.23
3.750    0.00    0.73      0.767  IO      |       |       |       |     5.20
3.833    0.00    0.61      0.762  IO      |       |       |       |     5.16
3.917    0.00    0.51      0.758  IO      |       |       |       |     5.14
4.000    0.00    0.43      0.755  IO      |       |       |       |     5.12
4.083    0.00    0.36      0.752  O       |       |       |       |     5.10
4.167    0.00    0.31      0.750  O       |       |       |       |     5.08
4.250    0.00    0.26      0.748  O       |       |       |       |     5.07
4.333    0.00    0.22      0.746  O       |       |       |       |     5.06
4.417    0.00    0.18      0.745  O       |       |       |       |     5.05
4.500    0.00    0.15      0.744  O       |       |       |       |     5.04
4.583    0.00    0.13      0.743  O       |       |       |       |     5.03
4.667    0.00    0.11      0.742  O       |       |       |       |     5.03
4.750    0.00    0.09      0.741  O       |       |       |       |     5.02

 Remaining water in basin =    0.74 (Ac.Ft)

 ****************************HYDROGRAPH DATA****************************
               Number of intervals =    57
               Time interval =    5.0 (Min.)
               Maximum/Peak flow rate =        3.477 (CFS)
               Total volume =       0.232 (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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********** HYDROGRAPH INFORMATION **********

From study/file name: PRO1006100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 75
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 11.186 (CFS)
Total volume = 1.318 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 75
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0 2.8 5.59 8.39 11.19	Depth (Ft.)
0.083	0.44	0.00	0.002	OI	0.01
0.167	0.90	0.00	0.006	O I	0.04
0.250	1.04	0.00	0.013	O I	0.09
0.333	1.07	0.00	0.020	O I	0.14
0.417	1.08	0.00	0.027	O I	0.19
0.500	1.17	0.00	0.035	O I	0.24
0.583	1.24	0.00	0.043	O I	0.29
0.667	1.25	0.00	0.052	O I	0.35
0.750	1.26	0.00	0.061	O I	0.41
0.833	1.26	0.00	0.069	O I	0.47
0.917	1.26	0.00	0.078	O I	0.53
1.000	1.35	0.00	0.087	O I	0.59
1.083	1.42	0.00	0.096	O I	0.65
1.167	1.43	0.00	0.106	O I	0.72
1.250	1.44	0.00	0.116	O I	0.79
1.333	1.44	0.00	0.126	O I	0.85
1.417	1.44	0.00	0.136	O I	0.92
1.500	1.44	0.00	0.146	O I	0.99
1.583	1.44	0.00	0.156	O I	1.05
1.667	1.44	0.00	0.166	O I	1.12
1.750	1.44	0.00	0.176	O I	1.19
1.833	1.44	0.00	0.185	O I	1.25
1.917	1.44	0.00	0.195	O I	1.32

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2.000    1.53    0.00      0.206  o   I   |       |       |       |     1.39
2.083    1.51    0.00      0.216  o   I   |       |       |       |     1.46
2.167    1.54    0.00      0.227  o   I   |       |       |       |     1.53
2.250    1.60    0.00      0.237  o   I   |       |       |       |     1.61
2.333    1.61    0.00      0.248  o   I   |       |       |       |     1.68
2.417    1.62    0.00      0.260  o   I   |       |       |       |     1.76
2.500    1.62    0.00      0.271  o   I   |       |       |       |     1.83
2.583    1.62    0.00      0.282  o   I   |       |       |       |     1.91
2.667    1.62    0.00      0.293  o   I   |       |       |       |     1.99
2.750    1.71    0.00      0.304  o   I   |       |       |       |     2.06
2.833    1.78    0.00      0.316  o    I  |       |       |       |     2.14
2.917    1.79    0.00      0.329  o    I  |       |       |       |     2.23
3.000    1.80    0.00      0.341  o    I  |       |       |       |     2.31
3.083    1.80    0.00      0.353  o    I  |       |       |       |     2.39
3.167    1.89    0.00      0.366  o    I  |       |       |       |     2.48
3.250    1.96    0.00      0.379  o    I  |       |       |       |     2.57
3.333    1.97    0.00      0.393  o    I  |       |       |       |     2.66
3.417    2.07    0.00      0.407  o    I  |       |       |       |     2.75
3.500    2.23    0.00      0.421  o     I |       |       |       |     2.85
3.583    2.40    0.00      0.437  o     I |       |       |       |     2.96
3.667    2.49    0.00      0.454  o      I|       |       |       |     3.08
3.750    2.60    0.00      0.472  o      I|       |       |       |     3.19
3.833    2.68    0.00      0.490  o      I|       |       |       |     3.32
3.917    2.78    0.00      0.509  o      I|       |       |       |     3.45
4.000    2.86    0.00      0.528  o       I       |       |       |     3.58
4.083    2.96    0.00      0.548  o       I       |       |       |     3.71
4.167    3.13    0.00      0.569  o       I       |       |       |     3.86
4.250    3.32    0.00      0.591  o       |I      |       |       |     4.01
4.333    3.55    0.00      0.615  o       | I     |       |       |     4.17
4.417    3.79    0.00      0.640  o       | I     |       |       |     4.34
4.500    3.91    0.00      0.666  o       |  I    |       |       |     4.52
4.583    4.06    0.00      0.694  o       |  I    |       |       |     4.70
4.667    4.28    0.00      0.722  o       |   I   |       |       |     4.90
4.750    4.52    0.35      0.752  o       |   I   |       |       |     5.09
4.833    4.64    1.02      0.778  | O     |    I  |       |       |     5.27
4.917    4.78    1.61      0.802  |   O   |    I  |       |       |     5.43
5.000    5.01    2.13      0.823  |     O |     I |       |       |     5.58
5.083    5.72    2.65      0.843  |      O|       I       |       |     5.72
5.167    6.84    3.22      0.866  |       |O      |  I    |       |     5.87
5.250    7.79    3.77      0.892  |       | O     |    I  |       |     6.05
5.333    8.57    4.08      0.922  |       |  O    |       I       |     6.25
5.417    9.55    4.42      0.955  |       |   O   |       |  I    |     6.47
5.500   11.19    4.83      0.994  |       |    O  |       |     I |     6.74
5.583    7.80    5.15      1.025  |       |     O |    I  |       |     6.95
5.667    3.41    5.18      1.028  |       |I    O |       |       |     6.97
5.750    1.77    5.00      1.011  |    I  |     O |       |       |     6.85
5.833    1.09    4.76      0.987  |  I    |    O  |       |       |     6.69
5.917    0.76    4.49      0.962  | I     |   O   |       |       |     6.52
6.000    0.49    4.23      0.936  |I      |   O   |       |       |     6.35
6.083    0.21    3.96      0.910  I       |  O    |       |       |     6.17
6.167    0.04    3.70      0.885  I       | O     |       |       |     6.00
6.250    0.01    3.11      0.862  I       O       |       |       |     5.84
6.333    0.00    2.62      0.842  I      O|       |       |       |     5.71
6.417    0.00    2.20      0.825  I     O |       |       |       |     5.59
6.500    0.00    1.85      0.811  I    O  |       |       |       |     5.50
6.583    0.00    1.55      0.800  I   O   |       |       |       |     5.42
6.667    0.00    1.31      0.790  I  O    |       |       |       |     5.35
6.750    0.00    1.10      0.782  I  O    |       |       |       |     5.30
6.833    0.00    0.92      0.775  I O     |       |       |       |     5.25
6.917    0.00    0.78      0.769  I O     |       |       |       |     5.21
7.000    0.00    0.65      0.764  IO      |       |       |       |     5.18
7.083    0.00    0.55      0.760  IO      |       |       |       |     5.15
7.167    0.00    0.46      0.756  IO      |       |       |       |     5.12
7.250    0.00    0.39      0.753  IO      |       |       |       |     5.10
7.333    0.00    0.33      0.751  O       |       |       |       |     5.09
7.417    0.00    0.27      0.749  O       |       |       |       |     5.07
7.500    0.00    0.23      0.747  O       |       |       |       |     5.06
7.583    0.00    0.19      0.746  O       |       |       |       |     5.05
7.667    0.00    0.16      0.744  O       |       |       |       |     5.04
7.750    0.00    0.14      0.743  O       |       |       |       |     5.04
7.833    0.00    0.12      0.742  O       |       |       |       |     5.03
7.917    0.00    0.10      0.742  O       |       |       |       |     5.02
     Remaining water in basin =    0.74 (Ac.Ft)
     ****************************HYDROGRAPH DATA****************************
                  Number of intervals =    95
                  Time interval =    5.0 (Min.)
                  Maximum/Peak flow rate =       5.181 (CFS)
                  Total volume =       0.576 (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
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Study date: 06/09/22

Program License Serial Number 5006

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

From study/file name: PRO10024100.rte
**********HYDROGRAPH DATA**********
Number of intervals = 291
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 3.410 (CFS)
Total volume = 1.987 (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 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 291
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

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

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.148	0.001	0.148	0.148
2.000	0.295	0.002	0.295	0.295
3.000	0.443	0.003	0.443	0.443
4.000	0.590	0.004	0.590	0.590
5.000	0.738	0.005	0.738	0.738
6.000	0.885	3.698	0.872	0.898
7.000	1.033	5.229	1.015	1.051

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.9	1.70	2.56	3.41	Depth (Ft.)
0.083	0.09	0.00	0.000	O	|	|	|	|	0.00
0.167	0.17	0.00	0.001	OI	|	|	|	|	0.01
0.250	0.19	0.00	0.002	OI	|	|	|	|	0.02
0.333	0.24	0.00	0.004	O I	|	|	|	|	0.03
0.417	0.28	0.00	0.006	O I	|	|	|	|	0.04
0.500	0.29	0.00	0.008	O I	|	|	|	|	0.05
0.583	0.29	0.00	0.010	O I	|	|	|	|	0.07
0.667	0.29	0.00	0.012	O I	|	|	|	|	0.08
0.750	0.29	0.00	0.014	O I	|	|	|	|	0.09
0.833	0.33	0.00	0.016	O I	|	|	|	|	0.11
0.917	0.37	0.00	0.018	O I	|	|	|	|	0.12
1.000	0.38	0.00	0.021	O I	|	|	|	|	0.14
1.083	0.34	0.00	0.023	O I	|	|	|	|	0.16
1.167	0.30	0.00	0.025	O I	|	|	|	|	0.17
1.250	0.29	0.00	0.027	O I	|	|	|	|	0.19
1.333	0.29	0.00	0.029	O I	|	|	|	|	0.20
1.417	0.29	0.00	0.031	O I	|	|	|	|	0.21
1.500	0.29	0.00	0.033	O I	|	|	|	|	0.23
1.583	0.29	0.00	0.035	O I	|	|	|	|	0.24
1.667	0.29	0.00	0.037	O I	|	|	|	|	0.25

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1.750    0.29    0.00      0.039  o I     |        |        |        |     0.27
1.833    0.33    0.00      0.041  o  I    |        |        |        |     0.28
1.917    0.37    0.00      0.044  o  I    |        |        |        |     0.30
2.000    0.38    0.00      0.046  o  I    |        |        |        |     0.31
2.083    0.38    0.00      0.049  o  I    |        |        |        |     0.33
2.167    0.38    0.00      0.052  o  I    |        |        |        |     0.35
2.250    0.38    0.00      0.054  o  I    |        |        |        |     0.37
2.333    0.38    0.00      0.057  o  I    |        |        |        |     0.39
2.417    0.38    0.00      0.060  o  I    |        |        |        |     0.40
2.500    0.38    0.00      0.062  o  I    |        |        |        |     0.42
2.583    0.43    0.00      0.065  o   I   |        |        |        |     0.44
2.667    0.47    0.00      0.068  o   I   |        |        |        |     0.46
2.750    0.48    0.00      0.071  o   I   |        |        |        |     0.48
2.833    0.48    0.00      0.075  o   I   |        |        |        |     0.51
2.917    0.48    0.00      0.078  o   I   |        |        |        |     0.53
3.000    0.48    0.00      0.081  o   I   |        |        |        |     0.55
3.083    0.48    0.00      0.085  o   I   |        |        |        |     0.57
3.167    0.48    0.00      0.088  o   I   |        |        |        |     0.59
3.250    0.48    0.00      0.091  o   I   |        |        |        |     0.62
3.333    0.48    0.00      0.095  o   I   |        |        |        |     0.64
3.417    0.48    0.00      0.098  o   I   |        |        |        |     0.66
3.500    0.48    0.00      0.101  o   I   |        |        |        |     0.68
3.583    0.48    0.00      0.104  o   I   |        |        |        |     0.71
3.667    0.48    0.00      0.108  o   I   |        |        |        |     0.73
3.750    0.48    0.00      0.111  o   I   |        |        |        |     0.75
3.833    0.53    0.00      0.114  o   I   |        |        |        |     0.77
3.917    0.57    0.00      0.118  o    I  |        |        |        |     0.80
4.000    0.57    0.00      0.122  o    I  |        |        |        |     0.83
4.083    0.58    0.00      0.126  o    I  |        |        |        |     0.85
4.167    0.58    0.00      0.130  o    I  |        |        |        |     0.88
4.250    0.58    0.00      0.134  o    I  |        |        |        |     0.91
4.333    0.62    0.00      0.138  o    I  |        |        |        |     0.93
4.417    0.66    0.00      0.143  o     I |        |        |        |     0.96
4.500    0.67    0.00      0.147  o     I |        |        |        |     0.99
4.583    0.67    0.00      0.152  o     I |        |        |        |     1.03
4.667    0.67    0.00      0.156  o     I |        |        |        |     1.06
4.750    0.67    0.00      0.161  o     I |        |        |        |     1.09
4.833    0.72    0.00      0.166  o     I |        |        |        |     1.12
4.917    0.76    0.00      0.171  o      I|        |        |        |     1.16
5.000    0.76    0.00      0.176  o      I|        |        |        |     1.19
5.083    0.67    0.00      0.181  o     I |        |        |        |     1.22
5.167    0.59    0.00      0.185  o    I  |        |        |        |     1.25
5.250    0.58    0.00      0.189  o    I  |        |        |        |     1.28
5.333    0.62    0.00      0.193  o    I  |        |        |        |     1.31
5.417    0.66    0.00      0.198  o     I |        |        |        |     1.34
5.500    0.67    0.00      0.202  o     I |        |        |        |     1.37
5.583    0.72    0.00      0.207  o     I |        |        |        |     1.40
5.667    0.76    0.00      0.212  o      I|        |        |        |     1.44
5.750    0.76    0.00      0.218  o      I|        |        |        |     1.47
5.833    0.77    0.00      0.223  o      I|        |        |        |     1.51
5.917    0.77    0.00      0.228  o      I|        |        |        |     1.54
6.000    0.77    0.00      0.233  o      I|        |        |        |     1.58
6.083    0.81    0.00      0.239  o      I|        |        |        |     1.62
6.167    0.85    0.00      0.245  o       I        |        |        |     1.66
6.250    0.86    0.00      0.250  o       I        |        |        |     1.70
6.333    0.86    0.00      0.256  o       I        |        |        |     1.74
6.417    0.86    0.00      0.262  o       I        |        |        |     1.78
6.500    0.86    0.00      0.268  o       I        |        |        |     1.82
6.583    0.91    0.00      0.274  o       I        |        |        |     1.86
6.667    0.95    0.00      0.281  o       I        |        |        |     1.90
6.750    0.96    0.00      0.287  o       I        |        |        |     1.95
6.833    0.96    0.00      0.294  o       I        |        |        |     1.99
6.917    0.96    0.00      0.300  o       I        |        |        |     2.04
7.000    0.96    0.00      0.307  o       I        |        |        |     2.08
7.083    0.96    0.00      0.314  o       I        |        |        |     2.13
7.167    0.96    0.00      0.320  o       I        |        |        |     2.17
7.250    0.96    0.00      0.327  o       I        |        |        |     2.21
7.333    1.01    0.00      0.333  o       |I       |        |        |     2.26
7.417    1.04    0.00      0.341  o       |I       |        |        |     2.31
7.500    1.05    0.00      0.348  o       |I       |        |        |     2.36
7.583    1.10    0.00      0.355  o       | I      |        |        |     2.41
7.667    1.14    0.00      0.363  o       | I      |        |        |     2.46
7.750    1.15    0.00      0.371  o       | I      |        |        |     2.51
7.833    1.20    0.00      0.379  o       |  I     |        |        |     2.57
7.917    1.24    0.00      0.387  o       |  I     |        |        |     2.62
8.000    1.24    0.00      0.396  o       |  I     |        |        |     2.68
8.083    1.34    0.00      0.405  o       |   I    |        |        |     2.74
8.167    1.42    0.00      0.414  o       |    I   |        |        |     2.80
8.250    1.43    0.00      0.424  o       |    I   |        |        |     2.87
8.333    1.44    0.00      0.434  o       |    I   |        |        |     2.94
8.417    1.44    0.00      0.444  o       |    I   |        |        |     3.00
8.500    1.44    0.00      0.453  o       |    I   |        |        |     3.07
8.583    1.48    0.00      0.463  o       |    I   |        |        |     3.14
8.667    1.52    0.00      0.474  o       |     I  |        |        |     3.21
8.750    1.53    0.00      0.484  o       |     I  |        |        |     3.28
8.833    1.58    0.00      0.495  o       |     I  |        |        |     3.35
8.917    1.62    0.00      0.506  o       |      I |        |        |     3.43
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9.000	1.63	0.00	0.517	o	|	I|	|	3.50
9.083	1.72	0.00	0.529	o	|	I	|	3.58
9.167	1.80	0.00	0.541	o	|	I	|	3.67
9.250	1.82	0.00	0.553	o	|	|I	|	3.75
9.333	1.87	0.00	0.566	o	|	|I	|	3.84
9.417	1.91	0.00	0.579	o	|	|I	|	3.92
9.500	1.91	0.00	0.592	o	|	|I	|	4.01
9.583	1.96	0.00	0.605	o	|	| I	|	4.10
9.667	2.00	0.00	0.619	o	|	| I	|	4.20
9.750	2.01	0.00	0.633	o	|	| I	|	4.29
9.833	2.06	0.00	0.647	o	|	| I	|	4.38
9.917	2.10	0.00	0.661	o	|	| I	|	4.48
10.000	2.11	0.00	0.675	o	|	| I	|	4.58
10.083	1.78	0.00	0.689	o	|	I	|	4.67
10.167	1.51	0.00	0.700	o	|	I |	|	4.74
10.250	1.46	0.00	0.710	o	|	I |	|	4.81
10.333	1.44	0.00	0.720	o	|	I |	|	4.88
10.417	1.44	0.00	0.730	o	|	I |	|	4.95
10.500	1.44	0.05	0.740	o	|	I |	|	5.01
10.583	1.67	0.29	0.749	| o	|	I|	|	5.08
10.667	1.87	0.53	0.759	| o	|	|I	|	5.14
10.750	1.90	0.74	0.767	| o	|	|I	|	5.20
10.833	1.92	0.93	0.775	| o	|	|I	|	5.25
10.917	1.92	1.09	0.781	| o	|	|I	|	5.29
11.000	1.92	1.22	0.786	| o	|	|I	|	5.33
11.083	1.87	1.33	0.791	| o	|	|I	|	5.36
11.167	1.83	1.41	0.794	| o	|	|I	|	5.38
11.250	1.82	1.48	0.797	| o	|	|I	|	5.40
11.333	1.82	1.53	0.799	| o	|	|I	|	5.41
11.417	1.82	1.58	0.801	| o	|	|I	|	5.43
11.500	1.82	1.62	0.802	| o	|	o|I	|	5.44
11.583	1.73	1.64	0.803	| o	|	oI	|	5.44
11.667	1.65	1.65	0.803	| o	|	o|	|	5.45
11.750	1.63	1.65	0.803	| o	|	o|	|	5.44
11.833	1.68	1.65	0.803	| o	|	o|	|	5.45
11.917	1.72	1.66	0.804	| o	|	oI	|	5.45
12.000	1.72	1.67	0.804	| o	|	oI	|	5.45
12.083	2.05	1.70	0.806	| o	|	o| I	|	5.46
12.167	2.33	1.78	0.809	| o	|	o I	|	5.48
12.250	2.38	1.87	0.812	| o	|	|o I	|	5.51
12.333	2.44	1.96	0.816	| o	|	| o I	|	5.53
12.417	2.48	2.04	0.819	| o	|	| o I	|	5.55
12.500	2.49	2.11	0.822	| o	|	| o I	|	5.57
12.583	2.59	2.18	0.824	| o	|	| o I	|	5.59
12.667	2.66	2.25	0.827	| o	|	| o |I	|	5.61
12.750	2.68	2.32	0.830	| o	|	| o |I	|	5.63
12.833	2.73	2.38	0.832	| o	|	| o |I	|	5.64
12.917	2.77	2.44	0.835	| o	|	| o | I	|	5.66
13.000	2.78	2.49	0.837	| o	|	| o| I	|	5.67
13.083	3.08	2.56	0.840	| o	|	| o I	|	5.69
13.167	3.33	2.66	0.844	| o	|	| o I|	|	5.72
13.250	3.38	2.77	0.848	| o	|	| o I|	|	5.75
13.333	3.40	2.87	0.852	| o	|	| o I|	|	5.78
13.417	3.40	2.96	0.855	| o	|	| o I|	|	5.80
13.500	3.41	3.03	0.858	| o	|	| o I	|	5.82
13.583	2.82	3.04	0.859	| o	|	| I o	|	5.82
13.667	2.33	2.97	0.856	| o	|	| I | o	|	5.80
13.750	2.24	2.86	0.852	| o	|	| I | o	|	5.77
13.833	2.20	2.76	0.848	| o	|	| I |o	|	5.75
13.917	2.20	2.67	0.844	| o	|	| I |o	|	5.72
14.000	2.20	2.59	0.841	| o	|	| I o	|	5.70
14.083	2.39	2.55	0.839	| o	|	| IO|	|	5.69
14.167	2.55	2.54	0.839	| o	|	| O|	|	5.69
14.250	2.58	2.54	0.839	| o	|	| OI	|	5.69
14.333	2.54	2.54	0.839	| o	|	| O|	|	5.69
14.417	2.50	2.54	0.839	| o	|	| O|	|	5.69
14.500	2.50	2.53	0.839	| o	|	| O|	|	5.68
14.583	2.49	2.53	0.838	| o	|	| O|	|	5.68
14.667	2.49	2.52	0.838	| o	|	| O|	|	5.68
14.750	2.49	2.52	0.838	| o	|	| O|	|	5.68
14.833	2.45	2.51	0.838	| o	|	| IO|	|	5.68
14.917	2.41	2.50	0.837	| o	|	| IO|	|	5.67
15.000	2.40	2.48	0.837	| o	|	| IO|	|	5.67
15.083	2.35	2.46	0.836	| o	|	| IO|	|	5.67
15.167	2.31	2.44	0.835	| o	|	| IO |	|	5.66
15.250	2.30	2.42	0.834	| o	|	| IO |	|	5.65
15.333	2.25	2.40	0.833	| o	|	| IO |	|	5.65
15.417	2.21	2.37	0.832	| o	|	| I O |	|	5.64
15.500	2.21	2.35	0.831	| o	|	| I O |	|	5.63
15.583	2.02	2.31	0.830	| o	|	| I O |	|	5.62
15.667	1.86	2.25	0.827	| o	|	|I O |	|	5.61
15.750	1.83	2.19	0.825	| o	|	|I O |	|	5.59
15.833	1.82	2.13	0.823	| o	|	|I O |	|	5.58
15.917	1.82	2.08	0.821	| o	|	|I O |	|	5.56
16.000	1.82	2.04	0.819	| o	|	|I O |	|	5.55
16.083	1.12	1.95	0.815	| o	| I	| O |	|	5.53
16.167	0.53	1.77	0.808	| I |	| O	|	5.48

16.250	0.42	1.56	0.800	I	O			5.42
16.333	0.38	1.38	0.793	I	O			5.37
16.417	0.38	1.22	0.786	I	O			5.33
16.500	0.38	1.09	0.781	I	O			5.29
16.583	0.34	0.97	0.776	I	O			5.26
16.667	0.30	0.87	0.772	I	O			5.23
16.750	0.29	0.78	0.769	I	O			5.21
16.833	0.29	0.70	0.766	I	O			5.19
16.917	0.29	0.63	0.763	I	O			5.17
17.000	0.29	0.58	0.761	I	O			5.16
17.083	0.38	0.54	0.759	I	O			5.14
17.167	0.46	0.52	0.759	O				5.14
17.250	0.47	0.51	0.758	O				5.14
17.333	0.48	0.51	0.758	O				5.14
17.417	0.48	0.50	0.758	O				5.13
17.500	0.48	0.50	0.758	O				5.13
17.583	0.48	0.50	0.758	O				5.13
17.667	0.48	0.49	0.757	O				5.13
17.750	0.48	0.49	0.757	O				5.13
17.833	0.43	0.49	0.757	O				5.13
17.917	0.39	0.47	0.757	IO				5.13
18.000	0.39	0.46	0.756	IO				5.12
18.083	0.38	0.45	0.756	IO				5.12
18.167	0.38	0.44	0.755	IO				5.12
18.250	0.38	0.43	0.755	IO				5.11
18.333	0.38	0.42	0.755	O				5.11
18.417	0.38	0.42	0.754	O				5.11
18.500	0.38	0.41	0.754	O				5.11
18.583	0.34	0.40	0.754	O				5.11
18.667	0.30	0.39	0.753	IO				5.10
18.750	0.29	0.37	0.753	IO				5.10
18.833	0.24	0.36	0.752	IO				5.10
18.917	0.20	0.33	0.751	I O				5.09
19.000	0.19	0.31	0.750	IO				5.08
19.083	0.24	0.30	0.750	O				5.08
19.167	0.28	0.29	0.749	O				5.08
19.250	0.29	0.29	0.749	O				5.08
19.333	0.33	0.29	0.749	OI				5.08
19.417	0.37	0.30	0.750	OI				5.08
19.500	0.38	0.31	0.750	OI				5.08
19.583	0.34	0.32	0.751	O				5.09
19.667	0.30	0.32	0.751	IO				5.09
19.750	0.29	0.32	0.750	O				5.08
19.833	0.24	0.31	0.750	O				5.08
19.917	0.20	0.29	0.750	IO				5.08
20.000	0.19	0.28	0.749	IO				5.07
20.083	0.24	0.27	0.749	O				5.07
20.167	0.28	0.27	0.748	O				5.07
20.250	0.29	0.27	0.749	O				5.07
20.333	0.29	0.27	0.749	O				5.07
20.417	0.29	0.27	0.749	O				5.07
20.500	0.29	0.28	0.749	O				5.07
20.583	0.29	0.28	0.749	O				5.07
20.667	0.29	0.28	0.749	O				5.07
20.750	0.29	0.28	0.749	O				5.07
20.833	0.24	0.28	0.749	O				5.07
20.917	0.20	0.27	0.749	IO				5.07
21.000	0.19	0.26	0.748	IO				5.07
21.083	0.24	0.25	0.748	O				5.07
21.167	0.28	0.25	0.748	O				5.07
21.250	0.29	0.26	0.748	O				5.07
21.333	0.24	0.26	0.748	O				5.07
21.417	0.20	0.25	0.748	IO				5.07
21.500	0.19	0.24	0.747	IO				5.06
21.583	0.24	0.24	0.747	O				5.06
21.667	0.28	0.24	0.747	O				5.06
21.750	0.29	0.25	0.748	O				5.07
21.833	0.24	0.25	0.748	O				5.07
21.917	0.20	0.25	0.748	IO				5.07
22.000	0.19	0.24	0.747	IO				5.06
22.083	0.24	0.23	0.747	O				5.06
22.167	0.28	0.24	0.747	O				5.06
22.250	0.29	0.25	0.748	O				5.07
22.333	0.24	0.25	0.748	O				5.07
22.417	0.20	0.24	0.748	IO				5.06
22.500	0.19	0.24	0.747	IO				5.06
22.583	0.19	0.23	0.747	IO				5.06
22.667	0.19	0.22	0.747	IO				5.06
22.750	0.19	0.22	0.746	IO				5.06
22.833	0.19	0.21	0.746	IO				5.06
22.917	0.19	0.21	0.746	O				5.06
23.000	0.19	0.21	0.746	O				5.05
23.083	0.19	0.21	0.746	O				5.05
23.167	0.19	0.20	0.746	O				5.05
23.250	0.19	0.20	0.746	O				5.05
23.333	0.19	0.20	0.746	O				5.05
23.417	0.19	0.20	0.746	O				5.05

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23.500    0.19    0.20      0.746  |O      |       |       |       |     5.05
23.583    0.19    0.20      0.746  |O      |       |       |       |     5.05
23.667    0.19    0.20      0.746  |O      |       |       |       |     5.05
23.750    0.19    0.20      0.746  |O      |       |       |       |     5.05
23.833    0.19    0.19      0.746  |O      |       |       |       |     5.05
23.917    0.19    0.19      0.746  |O      |       |       |       |     5.05
24.000    0.19    0.19      0.746  |O      |       |       |       |     5.05
24.083    0.10    0.19      0.745  IO      |       |       |       |     5.05
24.167    0.02    0.17      0.744  IO      |       |       |       |     5.04
24.250    0.00    0.14      0.743  IO      |       |       |       |     5.04
24.333    0.00    0.12      0.743  IO      |       |       |       |     5.03
24.417    0.00    0.10      0.742  O       |       |       |       |     5.03
24.500    0.00    0.08      0.741  O       |       |       |       |     5.02

      Remaining water in basin =    0.74 (Ac.Ft)


      ****************************HYDROGRAPH DATA****************************
                  Number of intervals =   294
                  Time interval =    5.0 (Min.)
                  Maximum/Peak flow rate =        3.041 (CFS)
                  Total volume =       1.246 (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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Section 5

Catch Basin and Hydraulic Grade Calculations

```
T1 FOREMOST 10062                                                                0
T2 EXISTING LAT A-2A
T3 PREPARED BY J.CONTRERAS
SO   1000.2201445.830  1                          1450.250
R    1005.3301446.410  1      .013                              .000    .000 0
R    1124.0801446.770  1      .013                              .000    .000 0
R    1284.5301447.250  1      .013                              .000    .000 0
JX   1289.5601447.270  3  2   .014    4.500         1447.360      -45.0        .000
R    1335.8901447.420  3      .013                              .000    .000 0
R    1371.3401447.540  3      .013                              .000    .000 0
R    1912.0001449.310  3      .013                              .000    .000 0
R    2088.0901449.830  3      .013                              .000    .000 0
JX   2090.0901449.850  5  4   .014    1.600         1449.840      -45.0        .000
R    2325.8201450.560  5      .013                              .000    .000 0
R    2745.0201451.820  5      .013                              .000    .000 0
JX   2749.7001451.850  7  6   .014    1.500         1451.82       -45.0        .000
R    3130.8301455.640  7      .013                              .000    .000 0
R    3349.0001457.800  7      .013                              .000    .000 0
JX   3351.0001457.820  9  8   .014    5.180         1457.85       -45.0        .000
R    3393.8701458.260  9      .013                              .000    .000 0
R    3412.7901458.450  9      .013                              .000    .000 0
SH   3412.7901458.450  9                          1458.450
CD   1  4   1    .000   2.500     .000  .000  .000   .00
CD   2  4   1    .000   1.500     .000  .000  .000   .00
CD   3  4   1    .000   1.500     .000  .000  .000   .00
CD   4  4   1    .000   1.500     .000  .000  .000   .00
CD   5  4   1    .000   1.500     .000  .000  .000   .00
CD   6  4   1    .000   1.500     .000  .000  .000   .00
CD   7  4   1    .000   1.500     .000  .000  .000   .00
CD   8  4   1    .000   1.500     .000  .000  .000   .00
CD   9  4   1    .000   1.500     .000  .000  .000   .00
Q             1.100   .0
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FILE: LATA2AU.WSW                    W S P G W  - EDIT LISTING - Version 14.01          Date: 6-13-2022  Time:10:37: 8
                                WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING                          PAGE    1
 CARD  SECT  CHN   NO OF  AVE PIER  HEIGHT 1  BASE    ZL    ZR   INV   Y(1)  Y(2)  Y(3)  Y(4)  Y(5)  Y(6)  Y(7)  Y(8)  Y(9)  Y(10)
 CODE   NO   TYPE PIER/PIP WIDTH    DIAMETER  WIDTH             DROP

 CD      1    4      1             2.500
 CD      2    4      1             1.500
 CD      3    4      1             1.500
 CD      4    4      1             1.500
 CD      5    4      1             1.500
 CD      6    4      1             1.500
 CD      7    4      1             1.500
 CD      8    4      1             1.500
 CD      9    4      1             1.500
                                          W S P G W                                                  PAGE NO   1
                          WATER SURFACE PROFILE - TITLE CARD LISTING
HEADING LINE NO 1 IS -
                            FOREMOST 10062
HEADING LINE NO 2 IS -
                            EXISTING LAT A-2A
HEADING LINE NO 3 IS -
                            PREPARED BY J.CONTRERAS
                                          W S P G W                                                  PAGE NO   2
                          WATER SURFACE PROFILE - ELEMENT CARD LISTING
 ELEMENT NO   1 IS A SYSTEM OUTLET      *         *     *
                     U/S DATA   STATION    INVERT  SECT                                  W S ELEV
                                1000.220 1445.830    1                                   1450.250
 ELEMENT NO   2 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1005.330 1446.410    1              .013                        .000     .000      .000     0
 ELEMENT NO   3 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1124.080 1446.770    1              .013                        .000     .000      .000     0
 ELEMENT NO   4 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1284.530 1447.250    1              .013                        .000     .000      .000     0
 ELEMENT NO   5 IS A JUNCTION          *         *     *     *              *                    *                  *
                     U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                                1289.560 1447.270    3     2     0   .014     4.500      .000  1447.360      .000 -45.000     .000
                                                                                                RADIUS    ANGLE
                                                                                                  .000     .000
 ELEMENT NO   6 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1335.890 1447.420    3              .013                        .000     .000      .000     0
 ELEMENT NO   7 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1371.340 1447.540    3              .013                        .000     .000      .000     0
 ELEMENT NO   8 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                1912.000 1449.310    3              .013                        .000     .000      .000     0
 ELEMENT NO   9 IS A REACH             *         *     *
                     U/S DATA   STATION    INVERT  SECT              N                        RADIUS    ANGLE     ANG PT  MAN H
                                2088.090 1449.830    3              .013                        .000     .000      .000     0
 ELEMENT NO  10 IS A JUNCTION          *         *     *     *              *                    *                  *
                     U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                                2090.090 1449.850    5     4     0   .014     1.600      .000  1449.840      .000 -45.000     .000
                                                                                                RADIUS    ANGLE
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                                                                                                                .000    .000
                                                  W S P G W                                                                          PAGE NO   3
                          WATER SURFACE PROFILE - ELEMENT CARD LISTING
ELEMENT NO  11 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             2325.820 1450.560    5              .013                                .000     .000      .000     0
ELEMENT NO  12 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             2745.020 1451.820    5              .013                                .000     .000      .000     0
ELEMENT NO  13 IS A JUNCTION              *         *     *     *              *                      *                *
                  U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                             2749.700 1451.850    7     6     0   .014     1.500      .000  1451.820      .000  45.000     .000
                                                                                          RADIUS    ANGLE
                                                                                            .000    .000
ELEMENT NO  14 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             3130.830 1455.640    7              .013                                .000     .000      .000     0
ELEMENT NO  15 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             3349.000 1457.800    7              .013                                .000     .000      .000     0
ELEMENT NO  16 IS A JUNCTION              *         *     *     *              *                      *                *
                  U/S DATA   STATION    INVERT  SECT LAT-1 LAT-2   N      Q3        Q4     INVERT-3 INVERT-4  PHI 3  PHI 4
                             3351.000 1457.820    9     8     0   .014     5.180      .000  1457.850      .000  45.000     .000
                                                                                          RADIUS    ANGLE
                                                                                            .000    .000
ELEMENT NO  17 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             3393.870 1458.260    9              .013                                .000     .000      .000     0
ELEMENT NO  18 IS A REACH                 *         *     *
                  U/S DATA   STATION    INVERT  SECT              N                                RADIUS    ANGLE     ANG PT  MAN H
                             3412.790 1458.450    9              .013                                .000     .000      .000     0
ELEMENT NO  19 IS A SYSTEM HEADWORKS                *                    *
                  U/S DATA   STATION    INVERT  SECT                                  W S ELEV
                             3412.790 1458.450    9                                  1458.450
```

Program Package Serial Number: 1297

WATER SURFACE PROFILE LISTING Date: 6-13-2022 Time:10:37:16

FOREMOST 10062
EXISTING LAT A-2A
PREPARED BY J.CONTRERAS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT) / SF Ave	Water Elev / HF	Q (CFS) / SE Dpth	Vel (FPS) / Froude N	Vel Head / Norm Dp	Energy Grd.El. / "N"	Super Elev / X-Fall	Critical Depth / ZR	Flow Top Width	Height/Dia.-FT / Type Ch	Base Wt or I.D.	ZL	No Wth Prs/Pip
1000.220	1445.830	4.420	1450.250	13.88	2.83	.12	1450.37	.00	1.25	.00	2.500	.000	.00	1 .0
5.110	.1135					.0011	.01	4.42	.00	.54	.013	.00	.00	PIPE
1005.330	1446.410	3.846	1450.256	13.88	2.83	.12	1450.38	.00	1.25	.00	2.500	.000	.00	1 .0
118.750	.0030					.0011	.14	3.85	.00	1.42	.013	.00	.00	PIPE
1124.080	1446.770	3.622	1450.392	13.88	2.83	.12	1450.52	.00	1.25	.00	2.500	.000	.00	1 .0
160.450	.0030					.0011	.18	3.62	.00	1.42	.013	.00	.00	PIPE
1284.530	1447.250	3.326	1450.576	13.88	2.83	.12	1450.70	.00	1.25	.00	2.500	.000	.00	1 .0
JUNCT STR	.0040					.0053	.03	3.33	.00		.014	.00	.00	PIPE
1289.560	1447.270	3.159	1450.429	9.38	5.31	.44	1450.87	.00	1.18	.00	1.500	.000	.00	1 .0
46.330	.0032					.0080	.37	3.16	.00	1.50	.013	.00	.00	PIPE
1335.890	1447.420	3.378	1450.798	9.38	5.31	.44	1451.24	.00	1.18	.00	1.500	.000	.00	1 .0
35.450	.0034					.0080	.28	3.38	.00	1.50	.013	.00	.00	PIPE
1371.340	1447.540	3.541	1451.081	9.38	5.31	.44	1451.52	.00	1.18	.00	1.500	.000	.00	1 .0
540.660	.0033					.0080	4.31	3.54	.00	1.50	.013	.00	.00	PIPE
1912.000	1449.310	6.082	1455.392	9.38	5.31	.44	1455.83	.00	1.18	.00	1.500	.000	.00	1 .0
176.090	.0030					.0080	1.40	6.08	.00	1.50	.013	.00	.00	PIPE
2088.090	1449.830	6.966	1456.796	9.38	5.31	.44	1457.23	.00	1.18	.00	1.500	.000	.00	1 .0
JUNCT STR	.0100					.0078	.02	6.97	.00		.014	.00	.00	PIPE

Program Package Serial Number: 1297

WATER SURFACE PROFILE LISTING Date: 6-13-2022 Time:10:37:16

FOREMOST 10062
EXISTING LAT A-2A
PREPARED BY J.CONTRERAS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT) / SF Ave	Water Elev / HF	Q (CFS) / SE Dpth	Vel (FPS) / Froude N	Vel Head / Norm Dp	Energy Grd.El. / "N"	Super Elev / X-Fall	Critical Depth / ZR	Flow Top Width	Height/Dia.-FT /	Base Wt or I.D. /	ZL /	No Wth Prs/Pip / Type Ch
2090.090	1449.850	7.217	1457.067	7.78	4.40	.30	1457.37	.00	1.08	.00	1.500	.000	.00	1 .0
235.730	.0030					.0055	1.29	7.22	.00	1.50	.013	.00	.00	PIPE
2325.820	1450.560	7.800	1458.360	7.78	4.40	.30	1458.66	.00	1.08	.00	1.500	.000	.00	1 .0
419.200	.0030					.0055	2.30	7.80	.00	1.50	.013	.00	.00	PIPE
2745.020	1451.820	8.839	1460.659	7.78	4.40	.30	1460.96	.00	1.08	.00	1.500	.000	.00	1 .0
JUNCT STR	.0064					.0053	.02	8.84	.00		.014	.00	.00	PIPE
2749.700	1451.850	9.028	1460.878	6.28	3.55	.20	1461.07	.00	.97	.00	1.500	.000	.00	1 .0
381.130	.0099					.0036	1.36	9.03	.00	.84	.013	.00	.00	PIPE
3130.830	1455.640	6.600	1462.240	6.28	3.55	.20	1462.44	.00	.97	.00	1.500	.000	.00	1 .0
218.170	.0099					.0036	.78	6.60	.00	.84	.013	.00	.00	PIPE
3349.000	1457.800	5.220	1463.020	6.28	3.55	.20	1463.22	.00	.97	.00	1.500	.000	.00	1 .0
JUNCT STR	.0099					.0021	.00	5.22	.00		.014	.00	.00	PIPE
3351.000	1457.820	5.396	1463.216	1.10	.62	.01	1463.22	.00	.39	.00	1.500	.000	.00	1 .0
42.870	.0103					.0001	.00	5.40	.00	.33	.013	.00	.00	PIPE
3393.870	1458.260	4.961	1463.221	1.10	.62	.01	1463.23	.00	.39	.00	1.500	.000	.00	1 .0
18.920	.0100					.0001	.00	4.96	.00	.33	.013	.00	.00	PIPE
3412.790	1458.450	4.773	1463.223	1.10	.62	.01	1463.23	.00	.39	.00	1.500	.000	.00	1 .0

```
T1 FOREMOST 10062                                                                0
T2 EXISTING LAT A-2A-A1
T3 PREPARED BY J.CONTRERAS
SO   1000.2201447.560  1                        1450.567
R    1002.5301447.870  1      .013                              .000    .000 0
R    1031.7501447.960  1      .013                              .000    .000 0
SH   1031.7501447.960  1                        1447.960
CD   1  4   1    .000   1.500     .000  .000  .000   .00
Q             5.18   .0
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FILE: LATA2A1.WSW                          W S P G W  - EDIT LISTING - Version 14.01              Date: 6-13-2022  Time:10:38:12
                                      WATER SURFACE PROFILE - CHANNEL DEFINITION LISTING                                  PAGE    1
 CARD  SECT  CHN   NO OF  AVE PIER  HEIGHT 1  BASE    ZL    ZR   INV   Y(1)  Y(2)  Y(3)  Y(4)  Y(5)  Y(6)  Y(7)  Y(8)  Y(9)  Y(10)
 CODE   NO   TYPE PIER/PIP WIDTH    DIAMETER  WIDTH             DROP

 CD      1    4      1             1.500
                                                W S P G W                                                          PAGE NO   1
                              WATER SURFACE PROFILE - TITLE CARD LISTING
HEADING LINE NO 1 IS -
                                FOREMOST 10062
HEADING LINE NO 2 IS -
                                EXISTING LAT A-2A-A1
HEADING LINE NO 3 IS -
                                PREPARED BY J.CONTRERAS
                                                W S P G W                                                          PAGE NO   2
                              WATER SURFACE PROFILE - ELEMENT CARD LISTING
 ELEMENT NO   1 IS A SYSTEM OUTLET     *         *     *
                      U/S DATA   STATION    INVERT  SECT                                      W S ELEV
                                 1000.220 1447.560    1                                       1450.567
 ELEMENT NO   2 IS A REACH            *         *     *
                      U/S DATA   STATION    INVERT  SECT              N                            RADIUS    ANGLE     ANG PT  MAN H
                                 1002.530 1447.870    1             .013                            .000     .000      .000     0
 ELEMENT NO   3 IS A REACH            *         *     *
                      U/S DATA   STATION    INVERT  SECT              N                            RADIUS    ANGLE     ANG PT  MAN H
                                 1031.750 1447.960    1             .013                            .000     .000      .000     0
 ELEMENT NO   4 IS A SYSTEM HEADWORKS                 *                        *
                      U/S DATA   STATION    INVERT  SECT                                      W S ELEV
                                 1031.750 1447.960    1                                      1447.960
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Program Package Serial Number: 1297

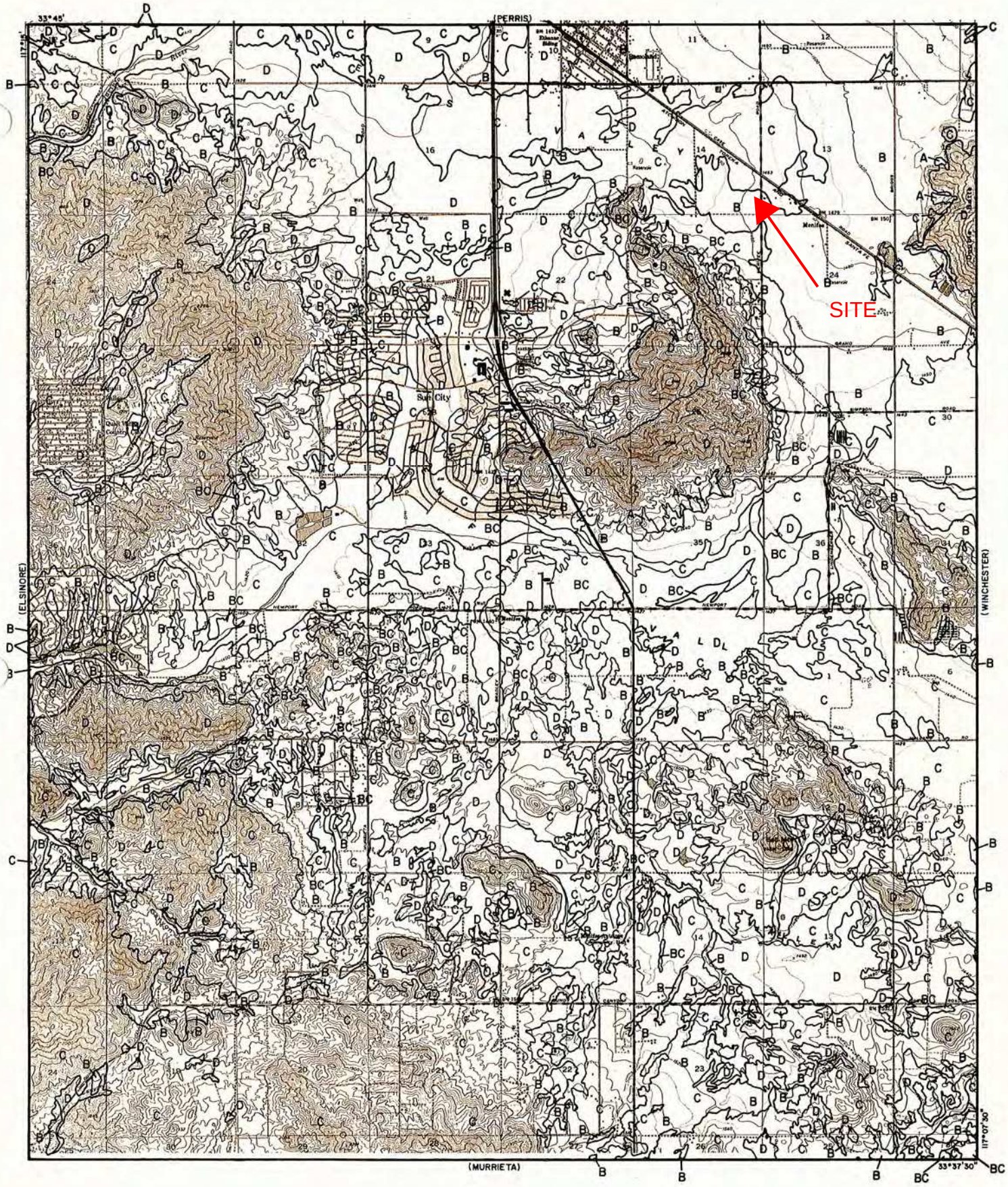
WATER SURFACE PROFILE LISTING Date: 6-13-2022 Time:10:38:21

FOREMOST 10062
EXISTING LAT A-2A-A1
PREPARED BY J.CONTRERAS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.220	1447.560	3.007	1450.567	5.18	2.93	.13	1450.70	.00	.88	.00	1.500	.000	.00	1 .0
2.310	.1342					.0024	.01	3.01	.00	.37	.013	.00	.00	PIPE
1002.530	1447.870	2.703	1450.573	5.18	2.93	.13	1450.71	.00	.88	.00	1.500	.000	.00	1 .0
29.220	.0031					.0024	.07	2.70	.00	1.10	.013	.00	.00	PIPE
1031.750	1447.960	2.684	1450.644	5.18	2.93	.13	1450.78	.00	.88	.00	1.500	.000	.00	1 .0

Section 6

Riverside County Plates



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC & WCD

HYDROLOGY MANUAL

N

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR ROMOLAND

B

PLATE C-1.42

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

Cover Type (3)	Quality of Cover (2)	Soil Group A	B	C	D
NATURAL COVERS -					
Barren (Rockland, eroded and graded land)		78	86	91	93
Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak)	Poor	53	70	80	85
	Fair	40	63	75	81
	Good	31	57	71	78
Chaparrel, Narrowleaf (Chamise and redshank)	Poor	71	82	88	91
	Fair	55	72	81	86
Grass, Annual or Perennial	Poor	67	78	86	89
	Fair	50	69	79	84
	Good	38	61	74	80
Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass)	Poor	63	77	85	88
	Fair	51	70	80	84
	Good	30	58	72	78
Open Brush (Soft wood shrubs - buckwheat, sage, etc.)	Poor	62	76	84	88
	Fair	46	66	77	83
	Good	41	63	75	81
Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent)	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	28	55	70	77
Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent)	Poor	57	73	82	86
	Fair	44	65	77	82
	Good	33	58	72	79
URBAN COVERS -					
Residential or Commercial Landscaping (Lawn, shrubs, etc.)	Good	32	56	69	75
Turf (Irrigated and mowed grass)	Poor	58	74	83	87
	Fair	44	65	77	82
	Good	33	58	72	79
AGRICULTURAL COVERS -					
Fallow (Land plowed but not tilled or seeded)		76	85	90	92

RCFC & WCD
HYDROLOGY MANUAL

RUNOFF INDEX NUMBERS FOR PERVIOUS AREA

ACTUAL IMPERVIOUS COVER

Land Use (1)	Range-Percent	Recommended Value For Average Conditions-Percent(2)
Natural or Agriculture	0 - 10	0
Single Family Residential: (3)		
40,000 S. F. (1 Acre) Lots	10 - 25	20
20,000 S. F. (½ Acre) Lots	30 - 45	40
7,200 - 10,000 S. F. Lots	45 - 55	50
Multiple Family Residential:		
Condominiums	45 - 70	65
Apartments	65 - 90	80
Mobile Home Park	60 - 85	75
Commercial, Downtown Business or Industrial	80 -100	90

Notes:

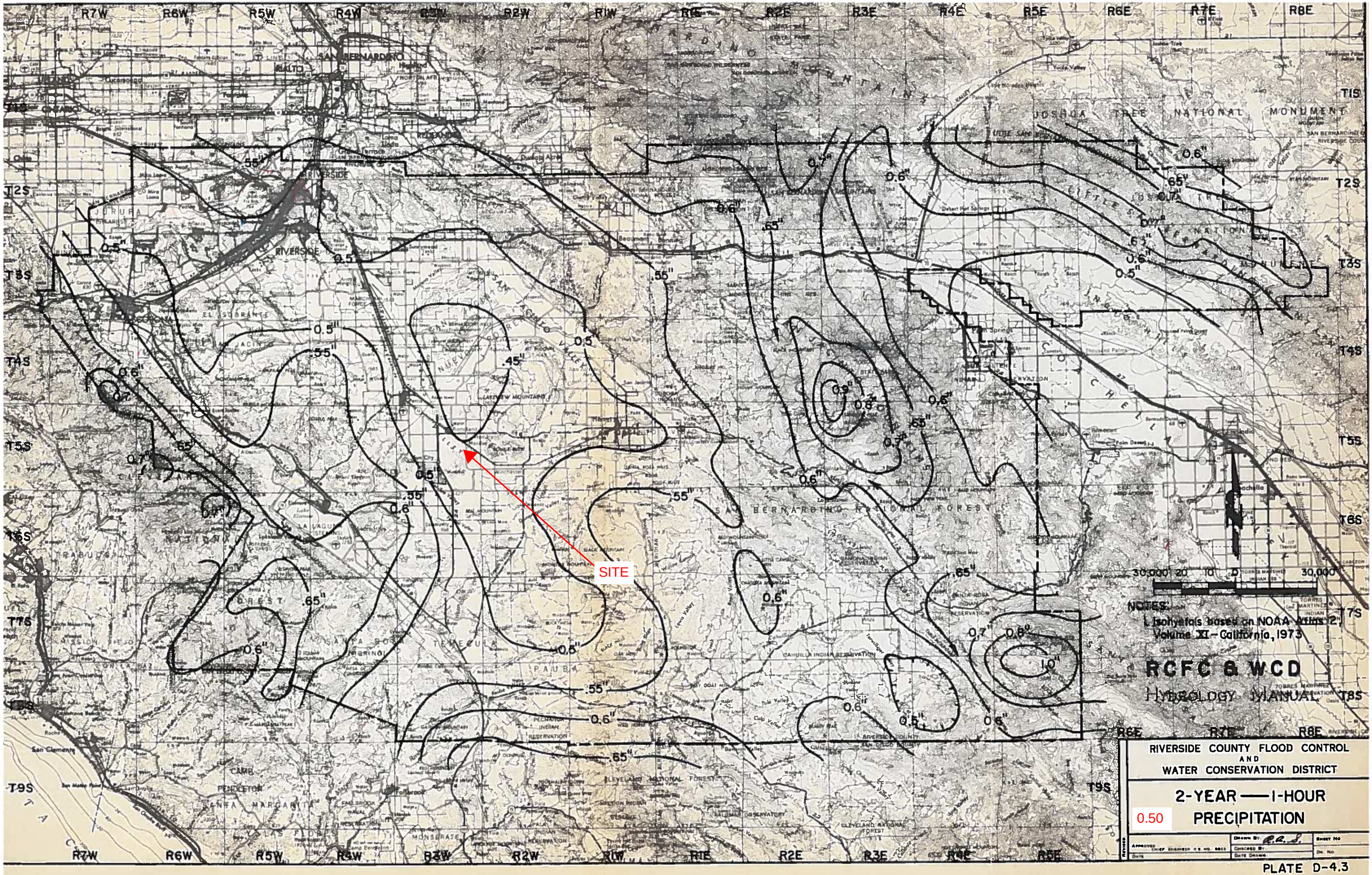
1. Land use should be based on ultimate development of the watershed. Long range master plans for the County and incorporated cities should be reviewed to insure reasonable land use assumptions.

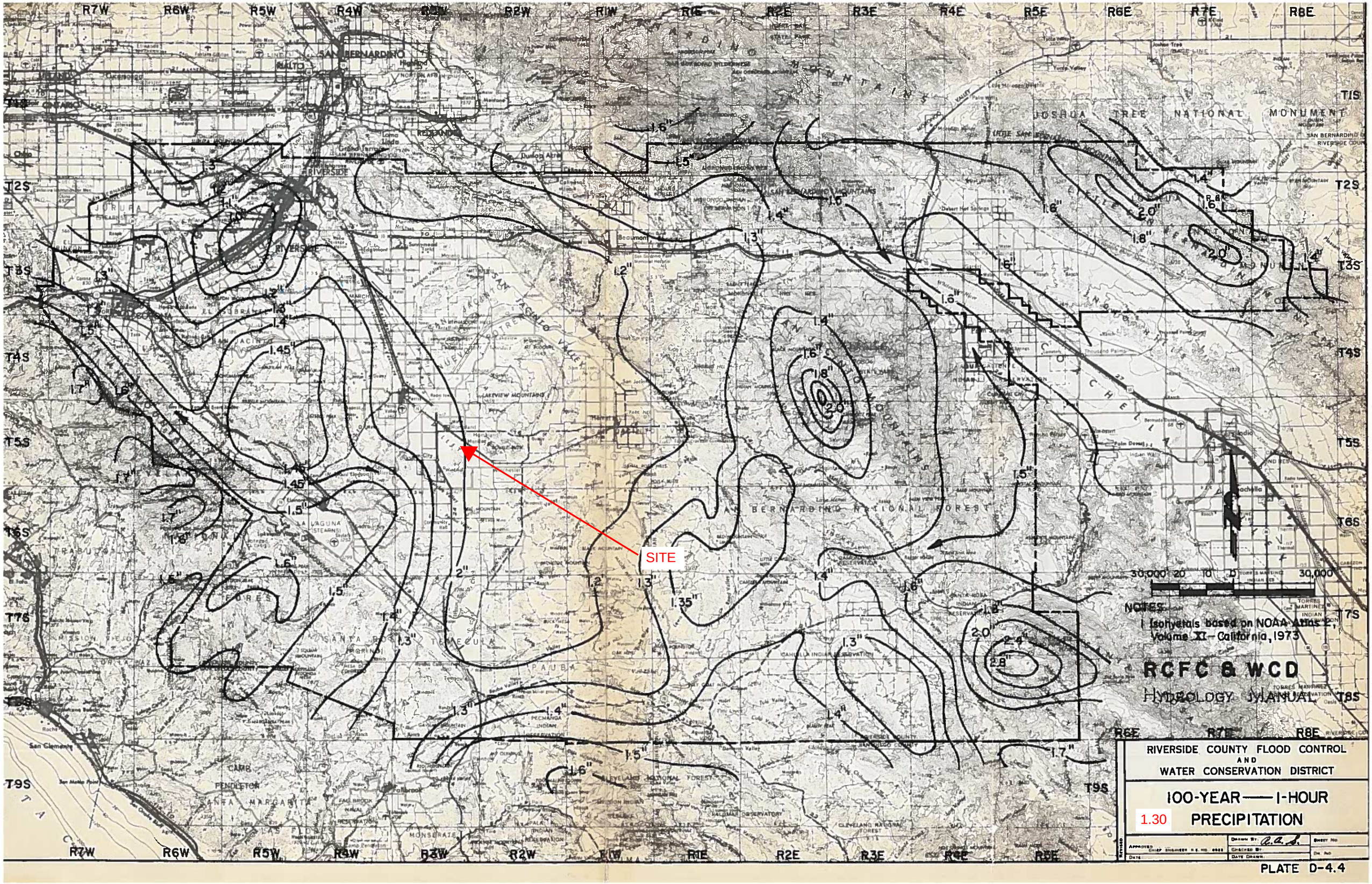
2. Recommended values are based on average conditions which may not apply to a particular study area. The percentage impervious may vary greatly even on comparable sized lots due to differences in dwelling size, improvements, etc. Landscape practices should also be considered as it is common in some areas to use ornamental gravels underlain by impervious plastic materials in place of lawns and shrubs. A field investigation of a study area should always be made, and a review of aerial photos, where available may assist in estimating the percentage of impervious cover in developed areas.

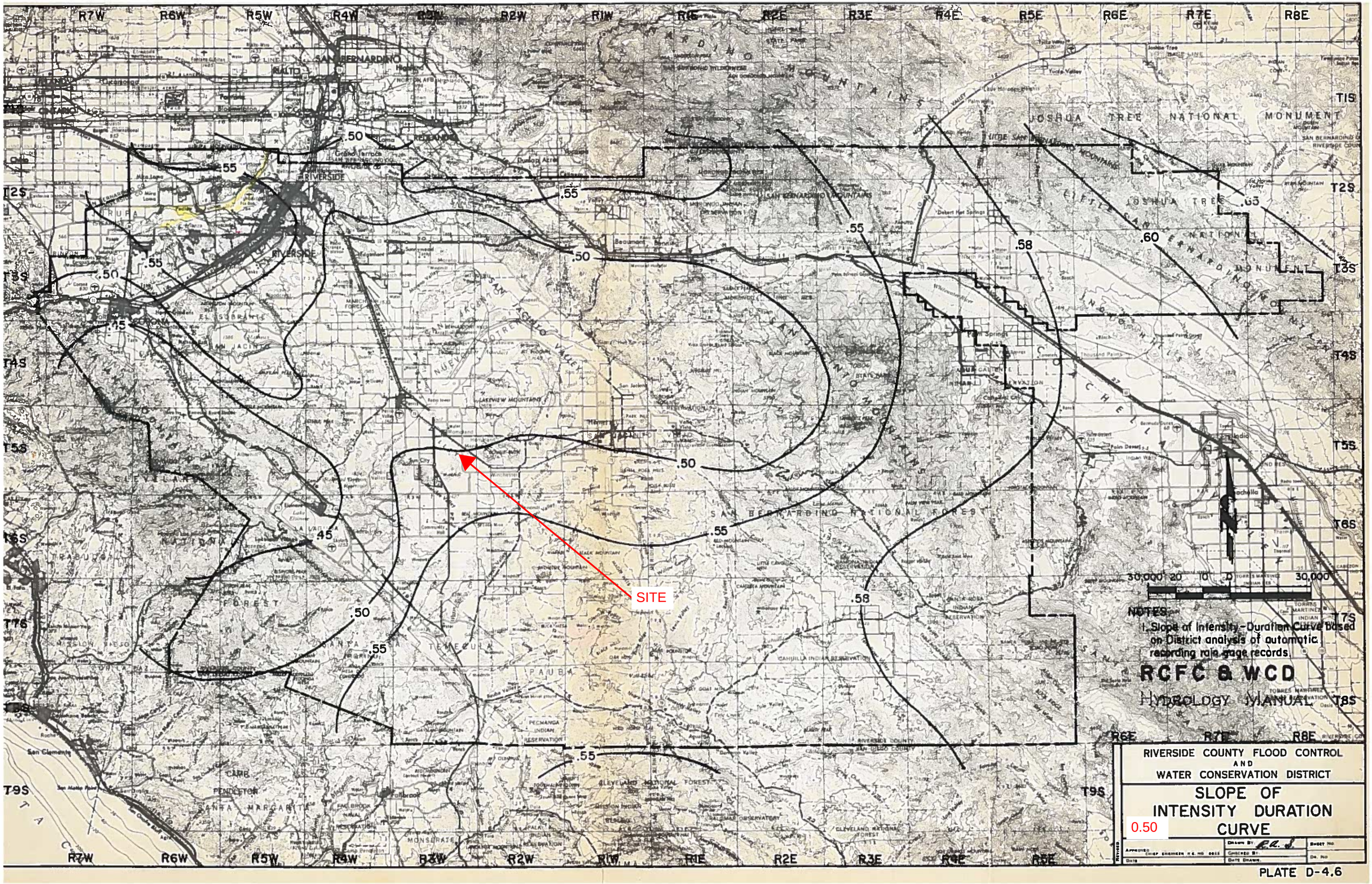
3. For typical horse ranch subdivisions increase impervious area 5 percent over the values recommended in the table above.

RCFC & WCD
HYDROLOGY MANUAL

IMPERVIOUS COVER FOR DEVELOPED AREAS


SITE
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
0.50
PLATE D-4.3


SITE
1.6"
1.5"
1.4"
1.3"
1.2"
1.6"
2.0"
1.8"
2.0"
1.4"
1.6"
1.4"
1.6"
1.8"
2.0"
1.4"
1.45"
1.7"
1.6"
1.5"
1.45"
1.7"
1.8"
1.6"
1.5"
2"
1.2
1.3"
1.35"
1.4"
1.6"
1.8"
2.0"
2.4"
2.8"
1.3"
1.4"
1.3"
1.4"
1.5"
1.6"
1.7"
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 — 1-HOUR
1.30
PRECIPITATION
PLATE D-4.4



NOTES:

1. Slope of Intensity-Duration Curve based on District analysis of automatic recording rain gage records.

RCFC & WCD

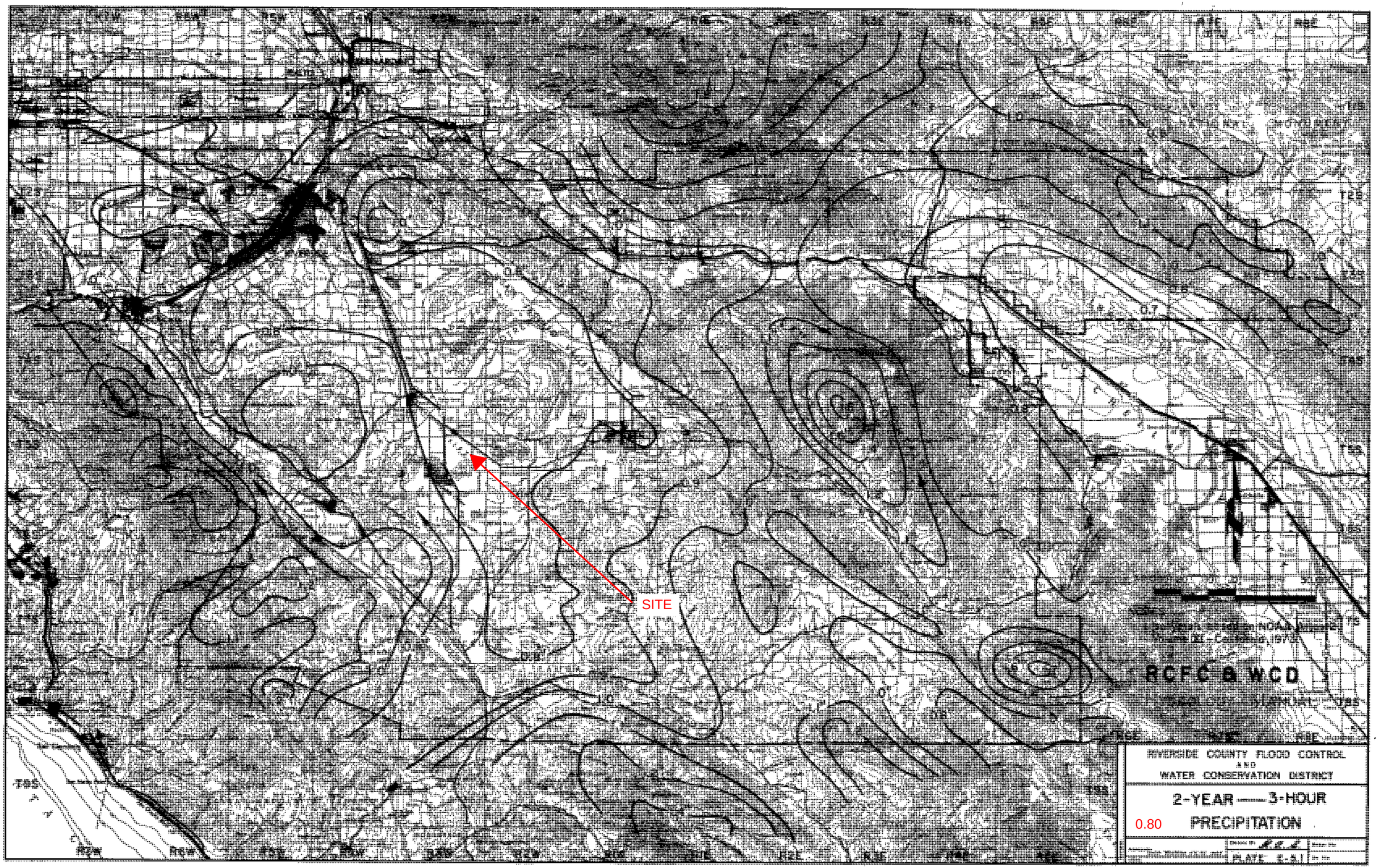
HYDROLOGY MANUAL

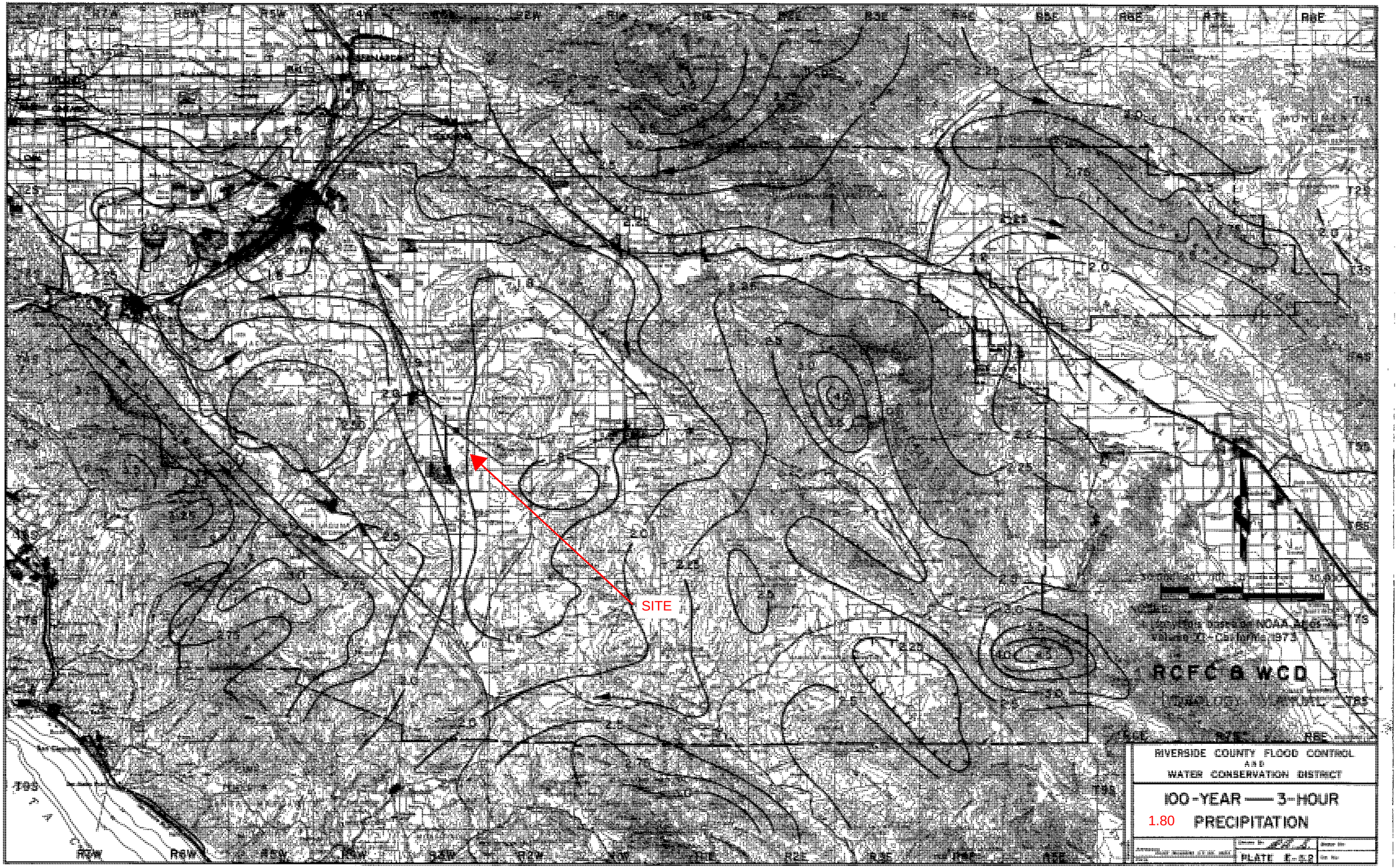
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

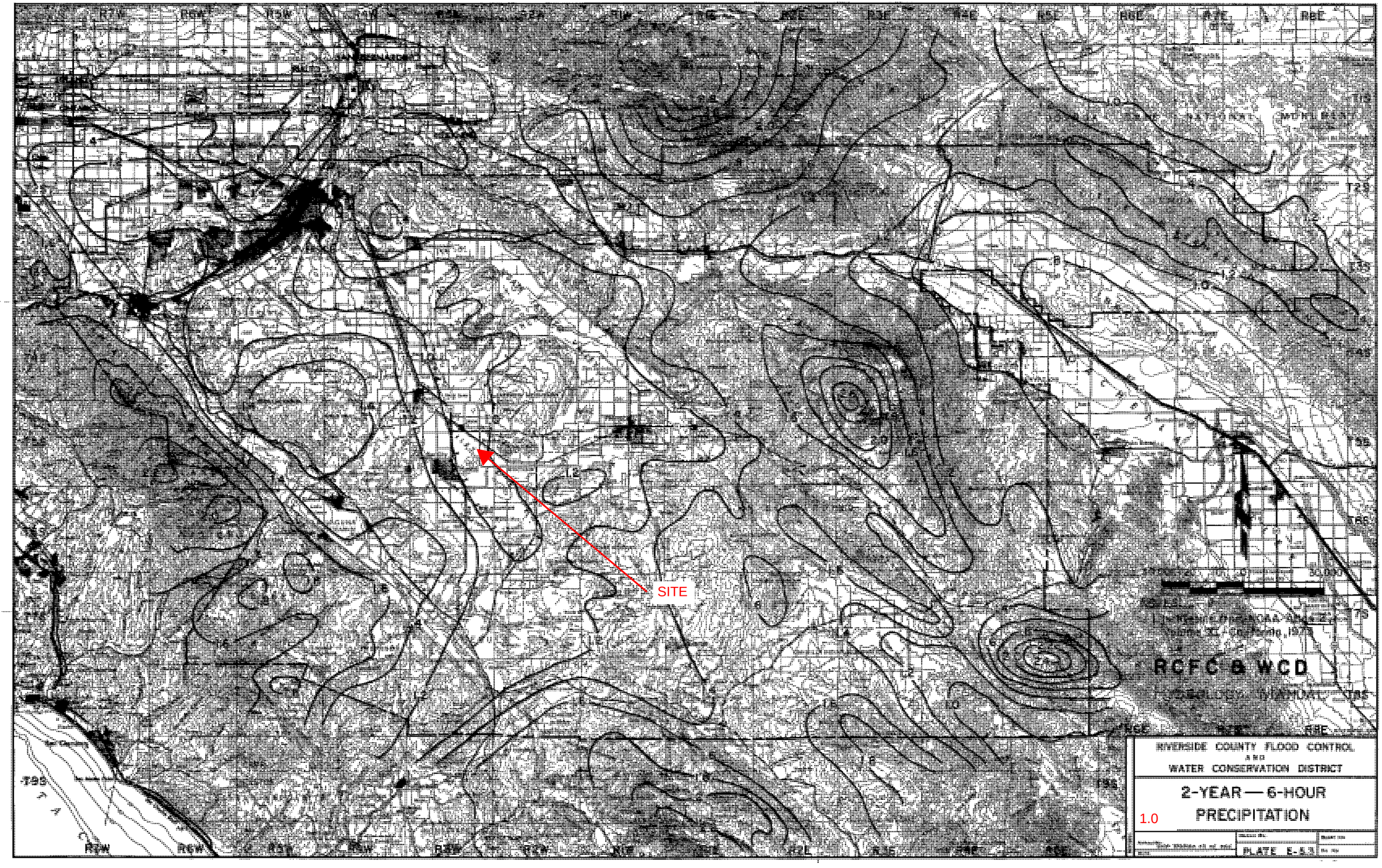
SLOPE OF INTENSITY DURATION CURVE

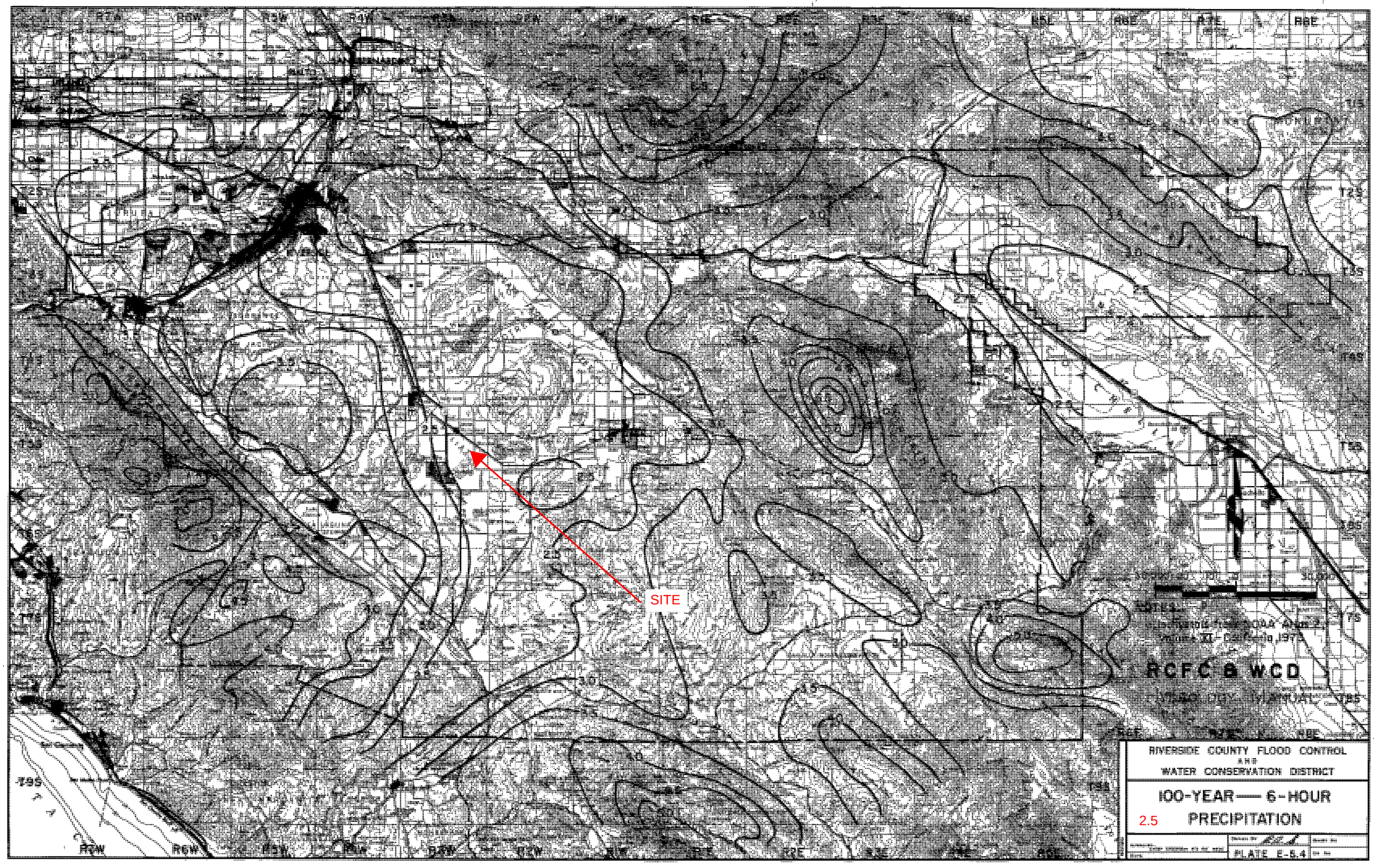
0.50

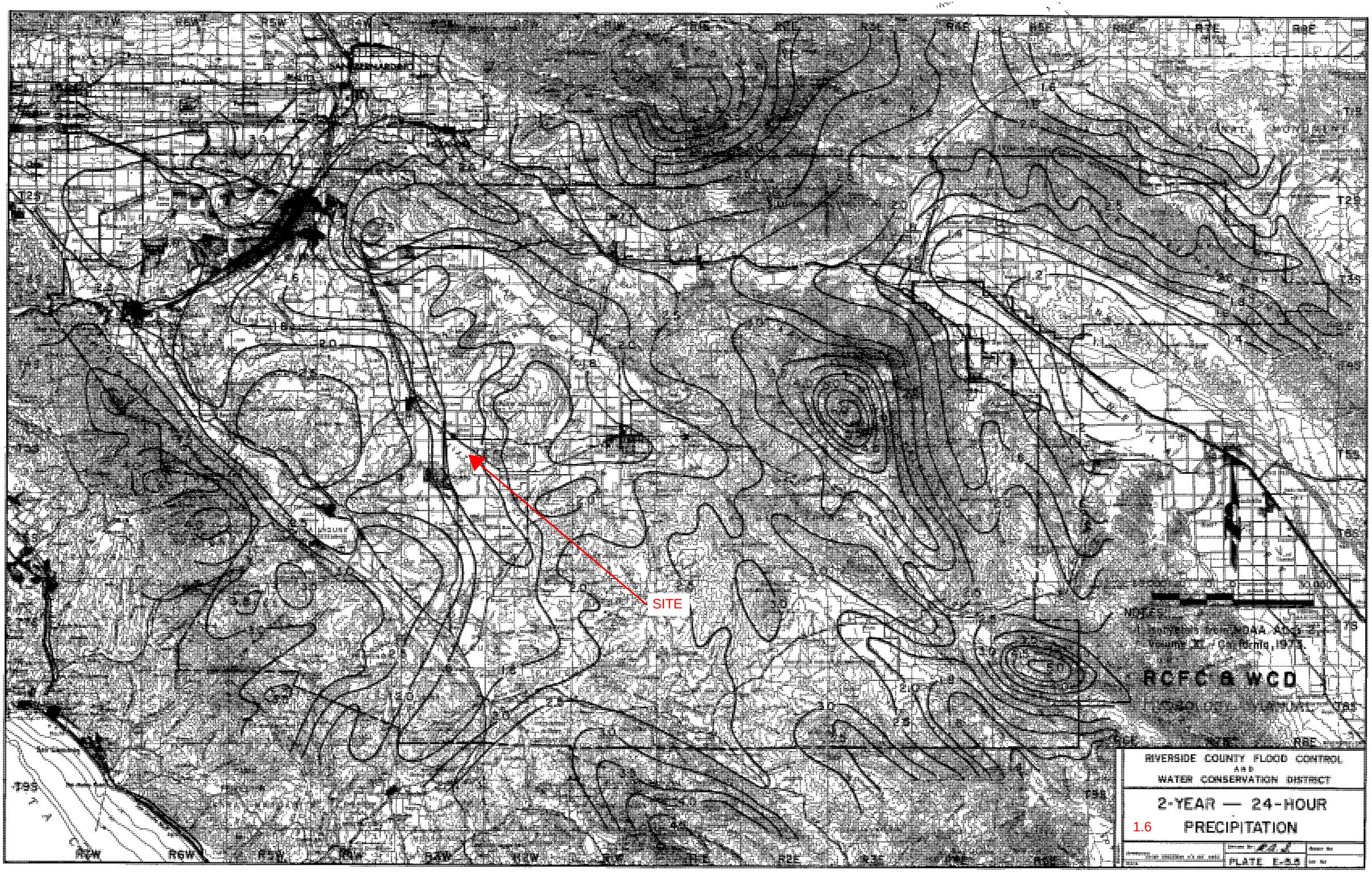
PLATE D-4.6


SITE
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 3-HOUR
0.80 PRECIPITATION
PLATE E-6.1


SITE
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 3-HOUR
1.80 PRECIPITATION
PLATE E-5.2
RCFC & WCD


SITE
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 6-HOUR
PRECIPITATION
1.0
PLATE E-6.1


SITE
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
100-YEAR — 6-HOUR
2.5 PRECIPITATION
RCFC & WCD
PLATE E-6.4


SITE
NOTES
RCFC & WCD
RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT
2-YEAR — 24-HOUR
1.6
PRECIPITATION
PLATE E-6.6

SITE

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

100-YEAR — 24-HOUR
4.0 PRECIPITATION

PLATE E-6.6

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF MENIFEE STANDARD DETAILS AND SPECIFICATIONS, THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE "GREENBOOK"), THE RIVERSIDE COUNTY STREET IMPROVEMENT STANDARDS AND SPECIFICATIONS AND STANDARD PLANS; COUNTY ORDINANCE NO. 461; CALTRANS STANDARD PLANS AND SPECIFICATIONS; CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. PRIOR TO START OF WORK, THE DEVELOPER/CONTRACTOR SHALL APPLY TO THE CITY OF MENIFEE ENGINEERING DEPARTMENT FOR AN ENCROACHMENT PERMIT FOR WORK PERFORMED WITHIN PUBLIC RIGHT-OF-WAY AND TO BE RESPONSIBLE FOR SATISFACTORY COMPLIANCE FOR CURRENT ENVIRONMENTAL REGULATIONS DURING THE LIFE OF CONSTRUCTION ACTIVITIES FOR THIS PROJECT. ADDITIONAL STUDIES MAY BE REQUIRED.
3. PRIOR TO START OF WORK, THE DEVELOPER/CONTRACTOR SHALL APPLY TO THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) FOR AN ENCROACHMENT PERMIT FOR WORK PERFORMED WITHIN THE STATE RIGHT-OF-WAY.
4. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE PROSECUTED TO COMPLETION WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. FAILURE TO COMPLY WITH THIS REQUIREMENT IS A VIOLATION OF THE CITY OF MENIFEE ENCROACHMENT PERMIT.
5. WHEN IMPROVEMENT PLANS HAVE BEEN SUBMITTED TO THE CITY FOR PLAN CHECKING AND THE PLAN CHECKING PROCESS HAS BEEN INTERRUPTED FOR A PERIOD OF ONE YEAR OR MORE, THE PLANS SHALL BE DEEMED ABANDONED. APPROVED IMPROVEMENT PLANS FOR ALL SUBDIVISIONS SHALL BE DEEMED ABANDONED IF CONSTRUCTION HAS NOT COMMENCED WITHIN TWO YEARS OF THE LATEST APPROVAL DATE (ONE YEAR FOR NON-SUBDIVISIONS). IF CONSTRUCTION IS INTERRUPTED FOR A PERIOD OF ONE YEAR OR MORE, THE PLANS SHALL BE DEEMED ABANDONED. ABANDONED PLANS SHALL BE RE-SUBMITTED FOR REVIEW AND ALL FEES SHALL BE PAID IN ACCORDANCE WITH THE PLAN CHECK AND PROCESSING POLICY PRIOR TO ANY PERMITS BEING ISSUED.
6. APPROVAL OF THIS PLAN BY THE CITY OF MENIFEE DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF, THE LOCATION OF, OR THE EXISTENCE OR NON-EXISTENCE OF, ANY UNDERGROUND UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THIS NOTE APPLIES TO ALL PAGES.
7. ALL REVISIONS TO IMPROVEMENT PLANS, OR MATERIAL SUBSTITUTION REQUESTS, PROPOSED DURING CONSTRUCTION SHALL BE SUBMITTED IN WRITING TO THE CITY ENGINEERING DEPARTMENT BY THE ENGINEER OF RECORD AND SHALL FOLLOW THE PROCEDURES AS APPROVED BY THE CITY ENGINEER.
8. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. THE DEVELOPER/CONTRACTOR SHALL DETERMINE THE EXACT LOCATIONS AND VERIFY CONDITIONS ON THE JOB SITE PRIOR TO COMMENCING WORK. THE DEVELOPER/CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DAMAGES OCCURRED DUE TO FAILURE TO LOCATE AND PRESERVE UNDERGROUND UTILITIES. HAND DIG AS NEEDED UNTIL CLEAR OF OBSTRUCTIONS.
9. NOTIFY UNDERGROUND SERVICE ALERT, (800) 227-2600, AND ALL CONCERNED UTILITY COMPANIES AT LEAST TWO WORKING DAYS IN ADVANCE OF EXCAVATION.
10. A PRECONSTRUCTION MEETING WITH THE PUBLIC WORKS INSPECTOR IS REQUIRED PRIOR TO START OF WORK.
11. RIGHT OF ENTRY FOR ANY WORK PERFORMED ON ADJACENT PROPERTIES IS REQUIRED. PERMISSION FOR RIGHT OF ENTRY SHALL BE OBTAINED IN WRITING AND THE LETTER SHALL COMPLY WITH CITY FORMAT.
12. APPROVAL OF PLANS AND / OR PERMIT ISSUANCE DOES NOT RELIEVE THE PERMITTEE OF THEIR RESPONSIBILITY TO MAINTAIN WORK WITHIN THE PROJECT PROPERTY BOUNDARIES AND DEDICATED CITY RIGHT-OF-WAY. TRESPASSING ON PRIVATE PROPERTY IS AGAINST THE LAW AND CAUSE FOR CANCELLATION OF PERMIT AND ISSUANCE OF STOP WORK NOTICE.
13. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO SUBMIT A REQUEST FOR PERMIT EXTENSION TO THE CITY ENGINEER IN WRITING PRIOR TO PERMIT EXPIRATION. EXTENSION AND EXPIRATION OF PERMITS SHALL BE IN ACCORDANCE WITH THE UNIFORM BUILDING CODE AND /OR THE CITY OF MENIFEE ENGINEERING DESIGN GUIDELINES POLICIES AND PROCEDURES.
14. THE DEVELOPER/CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLEAN UP ON CITY OF MENIFEE RIGHT-OF-WAY AFFECTED BY DEVELOPER'S/CONTRACTOR'S WORK. THE DEVELOPER/CONTRACTOR SHALL KEEP CITY OF MENIFEE RIGHT-OF-WAY CLEAN OF DEBRIS, WITH DUST AND OTHER NUISANCES BEING CONTROLLED AT ALL TIMES. METHOD OF STREET CLEANING SHALL BE WET SWEEPING OF ALL PAVED AREAS. THERE SHALL BE NO STOCKPILING OF CONSTRUCTION MATERIALS WITHIN THE CITY OF MENIFEE RIGHT-OF-WAY WITHOUT THE PERMISSION OF THE CITY ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE CITY OF MENIFEE PUBLIC WORKS INSPECTOR 48 HOURS PRIOR TO CONSTRUCTION AT (951) 672-6777.

STREET IMPROVEMENT NOTES

1. UNDERGROUND FACILITIES, WITH LATERALS, SHALL BE IN PLACE PRIOR TO CAP PAVING THE STREET, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING: SEWER, WATER, ELECTRIC, TELEPHONE, CABLE, GAS, STORM DRAINS.
2. STREET SECTION SHALL BE DETERMINED BY THE DEVELOPER'S SOILS ENGINEER AND SHALL BE BASED ON SUBGRADE SOILS TESTS AND THE CITY-SUPPLIED TRAFFIC INDEXES. PLANS SHALL BE REVISED TO SHOW ACTUAL PAVEMENT AND BASE SECTION TO BE CONSTRUCTED.
3. AS DETERMINED BY THE CITY ENGINEER, THE CONTRACTOR SHALL PROVIDE ROAD IMPROVEMENTS TO CENTERLINE, AND MAY BE REQUIRED TO RECONSTRUCT EXISTING PAVEMENT, INCLUDING BASE, AND MATCHING OVERLAY REQUIRED TO MEET THE STRUCTURAL STANDARDS FOR THE CURRENT ASSIGNED TRAFFIC INDEX.
4. A.C. PAVEMENT INSTALLED IN MULTIPLE LIFTS SHALL HAVE AT LEAST 2" IN THE FIRST LIFT AND AT LEAST 2" OF ASPHALT IN ALL SUCCEEDING LIFTS.
5. A.C. PAVEMENT SECTIONS 4" THICK AND GREATER SHALL BE CONSTRUCTED IN TWO LIFTS. A.C. PAVEMENT BASE COURSE SHALL BE TYPE B-PG70-10 WITH A MINIMUM 2" THICKNESS, AND THE FINAL LIFT SHALL BE TYPE C2-PG70-10 WITH A MINIMUM 2" THICKNESS.
6. APPROVED SIGNING AND STRIPING PLANS SHALL BE SUBJECT TO REVIEW AND REVISION BY THE CITY OF MENIFEE ENGINEERING DEPARTMENT IF NOT CONSTRUCTED WITHIN 12 MONTHS OF DATE OF CITY APPROVAL.
7. ANY SIGNAGE AND STRIPING DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO ITS ORIGINAL CONDITION.
8. PROVIDE BLUE RETROREFLECTIVE RAISED PAVEMENT MARKERS (RPMS) ON PRIVATE STREETS, PUBLIC STREETS, AND DRIVEWAYS TO INDICATE LOCATION OF FIRE HYDRANTS. RPMS SHALL BE INSTALLED PER CITY OF MENIFEE STANDARD PLAN NO. 705
9. PROVIDE ADDITIONAL SIGNS AND MARKINGS NOT INCLUDED IN THE SIGNING AND STRIPING PLAN WITHIN THE PROJECT AREA, OR ON ROADWAYS ADJACENT TO THE PROJECT BOUNDARIES, UPON THE REQUEST OF THE CITY ENGINEER, TO IMPROVE TRAFFIC SAFETY ON THE ROADS UNDER THE JURISDICTION OF THE DEVELOPER/CONTRACTOR.
10. TRAFFIC CONTROL PLANS ON EXISTING ROADWAYS SHALL BE PREPARED BY A TRAFFIC OR CIVIL ENGINEER, REGISTERED IN THE STATE OF CALIFORNIA, AND SUBMITTED FOR REVIEW AND APPROVAL BY THE CITY ENGINEERING DEPARTMENT, PRIOR TO PERMIT ISSUANCE.
11. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK IN CONNECTION WITH HIS PRIVATE DEVELOPMENT CONSTRUCTION.
12. EXISTING STORM DRAIN PIPES/CULVERTS (WHETHER TO BE CONNECTED TO, EXTENDED, ADJUSTED, DRAINED TO, OR JUST IN THE PROJECT VICINITY) MUST BE REPAIRED AND/OR CLEANED TO MAKE THEM FUNCTIONAL AND ACCEPTABLE TO THE CITY ENGINEER.
13. THE DEVELOPER SHALL APPLY TO RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT (RCFC & WCD) FOR PERMITS WHEN ANY STORM DRAIN PIPE NEEDS TO BE CONNECTED WITH A RCFC & WCD FACILITY AND ADD PERMIT # N/A ON THE PLAN.

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

STREET IMPROVEMENT NOTES (CONTINUED)

14. CONSTRUCTION PROJECTS THAT DISTURB ONE ACRE OR MORE, OR ON SITES THAT ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT DISTURBS ONE ACRE OR MORE, SHALL OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. DEVELOPERS/CONTRACTORS SHALL FILE A NOTICE OF INTENT (NOI) WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB), PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND MONITORING PLAN FOR THE SITE. THE PROJECT SHALL COMPLY WITH THE LATEST REGULATIONS SPECIFIC TO THE NPDES AT THE TIME OF PERMIT ISSUANCE. PRIOR TO CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL PROVIDE TO THE CITY OF MENIFEE A COPY OF THE NOI WITH A VALID WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL STREET NAME SIGNS CONFORMING TO THE CITY OF MENIFEE STANDARD PLAN NO. 815 AND NO. 816 AS APPLIES. THE CONTRACTOR SHALL SECURE THE APPROVAL OF THE CITY ENGINEERING DEPARTMENT FOR TYPE AND LOCATION OF THE STREET NAME SIGNS AND MARKINGS PRIOR TO INSTALLATION.
16. PROVIDE AND INSTALL STREET TREES IN ACCORDANCE WITH THE APPROVED LANDSCAPING PLANS AND CITY OF MENIFEE LANDSCAPING GUIDELINES.
17. PROVIDE LANDSCAPING CONSISTING OF GRASS AND PARKWAY TREES WITHIN PARKWAYS ON LOCAL RESIDENTIAL STREETS WITHOUT SEPARATE LANDSCAPE PLANS PER THE APPROVAL OF THE CITY COMMUNITY DEVELOPMENT DEPARTMENT. OTHER TYPES OF LANDSCAPING IN THESE AREAS, AND LANDSCAPING ON OTHER STREETS, SHALL REQUIRE SEPARATE LANDSCAPE PLANS. LANDSCAPING ENCROACHMENTS SHALL CONFORM TO CITY OF MENIFEE LANDSCAPING GUIDELINES.
18. PROVIDE STREET LIGHTS IN ACCORDANCE WITH THE APPROVED STREET LIGHTING PLAN AND PROVIDE FOR THE TEMPORARY OPERATION OF THE STREET LIGHTING SYSTEM.
19. PROVIDE CURB DEPRESSIONS AND DRIVEWAY APPROACHES ACCORDING TO THE CITY OF MENIFEE STANDARD PLAN NO. 205, 206, 207 AND NO. 208 AS APPROVED BY THE CITY ENGINEER.
20. THERE SHALL BE NO ABOVE-GROUND OBSTRUCTIONS IN ANY PORTION OF THE SIDEWALK (WHERE THE WIDTH, EXCLUSIVE OF TOP OF CURB, IS 5.5 FEET OR LESS). WHERE POWER/TELEPHONE/CABLE POLES, STREET LIGHT STANDARDS, FIRE HYDRANTS, AND CONTROL BOXES OCCUR IN THE 5.5 FOOT SIDEWALK, THE SIDEWALK SHALL BE MODIFIED PER CITY OF MENIFEE STANDARD PLAN 402.
21. PATCHINGOF SIDEWALK DAMAGE IS PROHIBITED; REPAIRS TO SIDEWALK SHALL INCLUDE REPLACEMENT OF THE ENTIRE PANEL FROM "JOINT-TO-JOINT".
22. FOR DRIVEWAY RECONSTRUCTION, CONTRACTOR SHALL SUBMIT TO THE MENIFEE CITY ENGINEER PROOF OF DRIVEWAY OWNER NOTIFICATION PRIOR TO CONSTRUCTION.
23. ALL PCC CURB RAMPS SHALL INCLUDE A DETECTABLE WARNING SYSTEM, TO INCLUDE TRUNCATED DOMES, PER ADA REQUIREMENTS. THE DETECTABLE WARNING SYSTEM SHALL BE ARMOR-TILE CAST IN PLACE SYSTEM, OR APPROVED EQUAL, NO ADHESIVES SHALL BE ALLOWED. THE CONTRASTING COLOR SHALL BE YELLOW.
24. CROSS GUTTERS SHALL BE CONSTRUCTED OVER 8" MINIMUM CRUSHED AGGREGATE BASE COMPACTED TO 95% RELATIVE DENSITY.
25. MAILBOXES AND POSTS SHALL BE INSTALLED PER AN APPROVED CITY STANDARD. SUBMIT PLOT PLAN OF BUILDING ORIENTATION ON LOT AND LOCATION OF MAIL BOX AND POST TO THE U.S. POST OFFICE FOR APPROVAL PRIOR TO INSTALLATION.
26. AS-BUILT PLANS AND ASSET/ATTRIBUTE DATA SHALL BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF IMPROVEMENTS AND RELEASE OF BONDS.

STORM DRAIN NOTES

1. CONSTRUCTION PROJECTS THAT DISTURB ONE ACRE OR MORE, OR ON SITES THAT ARE PART OF A LARGER COMMON PLAN OF DEVELOPMENT THAT DISTURBS ONE ACRE OR MORE, SHALL OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT. DEVELOPERS/CONTRACTORS SHALL FILE A NOTICE OF INTENT (NOI) WITH THE STATE WATER RESOURCES CONTROL BOARD (SWRCB), PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND MONITORING PLAN FOR THE SITE. THE PROJECT SHALL COMPLY WITH THE LATEST REGULATIONS SPECIFIC TO THE NPDES AT THE TIME OF PERMIT ISSUANCE. PRIOR TO CONSTRUCTION, THE DEVELOPER/CONTRACTOR SHALL PROVIDE TO THE CITY OF MENIFEE A COPY OF THE NOI WITH A VALID WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER.
2. ALL WORK SHALL CONFORM TO THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (THE "GREENBOOK") AND ALL "STANDARD PLANS" AND "SPECIAL PROVISIONS" REFERENCED THEREIN. HYDRAULIC DESIGN SHALL CONFORM TO THE REQUIREMENTS OF CITY OF MENIFEE STORM DRAIN DESIGN GUIDELINES; THE REQUIREMENTS OF RIVERSIDE COUNTY LAND DIVISION ORDINANCE NO. 460, SECTION 11; THE REQUIREMENTS OF THE RIVERSIDE COUNTY WATER QUALITY MANAGEMENT PLAN FOR URBAN RUNOFF; AND RIVERSIDE COUNTY FLOOD CONTROL DISTRICT AND WATER CONSERVATION DISTRICT (RCFCD) STANDARD DRAWINGS POLICIES AND PROCEDURES.
3. WHEN COVER TO FINISH GRADE IS 2 FEET OR LESS, PROVIDE CLASS C (420-C-2000) CONCRETE BACKFILL FROM BOTTOM OF PIPE TO MINIMUM DEPTH OVER PIPE OF 4 INCHES. FOR CULVERTS, PROVIDE MINIMUM TWO FEET COVER AT HINGE POINT/FLOW LINE FROM TOP OF PAVEMENT TO TOP OF CULVERT (KEEP OUT OF BASE). IF COVER IS LESS, PROVIDE CONCRETE SADDLE PER CALTRANS STANDARD SPECIFICATIONS SECTION 19-3.062 OR EQUAL. PIPES MAINTAINED BY THE CITY OF MENIFEE SHALL BE BACKFILLED PER CITY OF MENIFEE STANDARD PLAN NO. 812.
4. THE CONTRACTOR'S ATTENTION IS DIRECTED TO GREENBOOK SECTION 7-10.4.1 IN REGARD TO SAFETY ORDERS AND SHALL CONFORM TO THE REQUIREMENTS AS SHOWN ON CITY OF MENIFEE STANDARD PLAN NO. 813.
5. ALL STRUCTURAL CONCRETE SHALL BE PORTLAND CEMENT CONCRETE WITH AN ULTIMATE 28-DAY COMPRESSIVE STRENGTH OF 3250 PSI, UNLESS OTHERWISE NOTED.
6. NO CONCRETE SHALL BE PLACED UNTIL THE FORMS AND REINFORCING STEEL HAVE BEEN PLACED, INSPECTED, AND APPROVED.
7. TRANSVERSE REINFORCEMENT AND TRANSVERSE JOINTS SHALL BE PLACED AT RIGHT ANGLES (OR RADIAL) TO THE CONDUIT CENTERLINE EXCEPT AS OTHERWISE SHOWN ON THE DRAWINGS.
8. ALL STEEL ADJACENT TO FACE OF CONCRETE SHALL HAVE 2 1/2" CLEARANCE UNLESS OTHERWISE SPECIFIED. STEEL ADJACENT TO FACE OF CONCRETE AGAINST EARTH SHALL HAVE 3" CLEARANCE.
9. REINFORCEMENT SHALL BE DEFORMED BARS OF INTERMEDIATE GRADE STEEL, PER ASTM A615, GRADE 60.
10. ALL BAR BENDS AND HOOKS SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE "MANUAL OF STANDARD PRACTICES".
11. DIMENSIONS FROM FACE OF CONCRETE TO STEEL ARE TO CENTERLINE OF STEEL UNLESS OTHERWISE NOTED.
12. ALL STEEL THAT IS TO BE CONTINUOUS SHALL HAVE A MINIMUM LAP OF 30 BAR DIAMETERS OR 18" WHICHEVER IS GREATER. LONGITUDINAL STEEL SHALL BE CONTINUOUS AND EXTEND THROUGH ALL CONSTRUCTION JOINTS.
13. ALL CONSTRUCTION JOINTS IN THE FOOTING OF SLABS AND WALLS SHALL BE IN THE SAME PLANE. NO STAGGERING OF JOINTS WILL BE PERMITTED.
14. ALL EXPOSED EDGES SHALL BE FINISHED WITH A 3/4" CHAMFER.
15. UNLESS OTHERWISE SHOWN, CONCRETE DIMENSIONS SHALL BE MEASURED VERTICALLY OR HORIZONTALLY AND PARALLEL OR AT RIGHT ANGLES (OR RADIAL) TO THE CENTERLINE OF CONSTRUCTION.
16. ALL RCP PIPES ARE TO BE INSPECTED AND APPROVED BY THE PUBLIC WORKS INSPECTOR PRIOR TO INSTALLATION.
17. STORM DRAIN MANHOLES ARE TO BE RAISED AFTER FINAL LIFT OF PAVEMENT.

STORM DRAIN NOTES

18. ALL BACKFILL AND FILLS OUTSIDE OF STREET RIGHT-OF-WAY SHALL BE COMPACTED TO 90 PERCENT OF MAXIMUM DENSITY AS DETERMINED BY ASTM SOIL COMPACTION TEST D1557 METHOD "D" UNLESS OTHERWISE SPECIFIED. CERTIFICATION BY A REGISTERED CALIFORNIA SOILS ENGINEER SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO ACCEPTANCE OF THE WORK BY THE CITY.
19. ALL BACKFILL AND FILLS WITHIN STREET RIGHT-OF-WAY SHALL BE COMPACTED IN ACCORDANCE WITH CITY OF MENIFEE STANDARD PLAN NO. 812 UNLESS OTHERWISE NOTED AND INSPECTED BY THE CITY PUBLIC WORKS INSPECTOR. CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS INSPECTOR AT LEAST 48 HOURS IN ADVANCE PRIOR TO SOIL TESTING BY THE PRIVATE SOILS ENGINEER.
20. ALL BACKFILL AND FILL AROUND CLOSED CONDUIT IN THE STREET RIGHT-OF-WAY SHALL BE BROUGHT UP TO SUBGRADE OF THE ROAD OR TO 2 FEET ABOVE THE TOP OF CONDUIT, WHICHEVER IS LESS. THE PUBLIC WORKS INSPECTOR SHALL INSPECT ALL BACKFILL AND FILL ABOVE AFOREMENTIONED LIMITS. THE CONTRACTOR SHALL CONTACT THE PUBLIC WORKS DEPARTMENT AT (951) 672-6777 TO REQUEST AN INSPECTION AT LEAST 48 HOURS IN ADVANCE.
21. THE PUBLIC WORKS INSPECTOR MAY HAVE THE OPTION TO REQUIRE CONCRETE BACKFILL DURING CONSTRUCTION WHEN THE PIPE HAS LESS THAN 1 FOOT OF COVER AND IS SUBJECT TO HEAVY EQUIPMENT TRAFFIC. THE CONCRETE BACKFILL SHALL CONSIST OF 1:3:5 MIX, PORTLAND CEMENT CONCRETE POURED FROM WALL TO WALL OF TRENCH AND FROM BOTTOM OF TRENCH TO A MINIMUM OF 4 INCHES OVER THE TOP OF THE PIPE.
22. ALL PIPES SHALL BE PLACED IN TRENCH IN NATURAL GROUND AND/OR COMPACTED FILL. THE GROUND LEVEL BEFORE THE TRENCHING SHALL BE AT LEAST 3 FEET ABOVE THE TOP OF THE PIPE ELEVATION, OR AT FINISH SURFACE ELEVATION, WHICHEVER IS LESS. ALL BACKFILL IN EASEMENTS SHALL BE COMPACTED TO THE DENSITY REQUIRED BY THE GRADING PLAN OR SOILS REPORT, WHICHEVER IS MORE RESTRICTIVE.
23. PIPE SHALL BE EMBEDDED 5 INCHES INTO ALL STRUCTURES INCLUDING INLET AND OUTLET HEADWALLS, UNLESS OTHERWISE SPECIFIED.
24. ALL CATCH BASINS WITHIN THE DEDICATED STREET RIGHT-OF-WAY SHALL BE CONSTRUCTED PER STREET IMPROVEMENT PLAN STATIONING. ALL CATCH BASINS AND CONNECTOR PIPES ARE TO BE INSPECTED BY THE PUBLIC WORKS INSPECTOR.
25. A SYSTEM FOR CONTRIBUTORY DRAINAGE OPERABLE AT ALL TIMES SHALL BE PROVIDED BY THE CONTRACTOR TO THE SATISFACTION OF THE MENIFEE CITY ENGINEER UNTIL THIS STORM DRAIN SYSTEM IS ACCEPTED BY THE CITY.
26. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE BY THE CONTRACTOR, UNLESS OTHERWISE NOTED.
27. WHERE THE UTILITIES ARE INDICATED IN THE DRAWINGS TO BE SUPPORTED, SAID SUPPORTS SHALL BE IN ACCORDANCE WITH A.P.W.A. STANDARD PLAN NO. 224-1, UNLESS OTHERWISE INDICATED.
28. ALL OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES SHALL BE SEALED WITH 8 INCHES OF BRICK AND MORTAR AND 6 INCHES OF CONCRETE, UNLESS OTHERWISE SHOWN.
29. RCFCD STANDARD MANHOLE NOS. "1"-MH251, "2"-MH252, "3"-MH253 SHALL USE RCFCD STANDARD PLAN NO. MH260 FOR THE "24-INCH MANHOLE FRAME AND COVER" AND RCFCD MH259 FOR THE "STANDARD DROP STEP".
30. ALL MANHOLE COVERS NOT IN STREET PAVING SHALL BE PROVIDED WITH ALLEN SOCKET SET SCREW LOCKING DEVICES. THE CONTRACTOR SHALL DRILL AND TAP TWO HOLES TO A DEPTH OF 1 INCH AT 90 DEGREES TO PICK HOLE AND INSTALL 3/4" X 3/4" ALLEN SOCKET SET SCREWS.
31. AT THE BEGINNING AND END OF ALL POURS, LAYERS OF REINFORCEMENT SHALL BE PLACED WITHIN 3" OF THE TRANSVERSE CONSTRUCTION JOINT.
32. AFTER BACKFILLING AND PRIOR TO STREET PAVING, AN INSPECTION OF SAID LINE BY VIDEO SHALL BE REQUIRED AT NO COST TO THE CITY. ALL NEW MAINLINE STORM DRAINS SHALL BE VIDEO INSPECTED PER THE PROVISIONS OF GREENBOOK SECTION 500-1.1.5. THE RESULTS OF THE VIDEO INSPECTION SHALL BE RECORDED IN DVD FORMAT AND A COPY SHALL BE PROVIDED TO THE CITY AT NO COST. THE DEVELOPER OF THE PROJECT SHALL NOTIFY THE CITY OF MENIFEE IN WRITING AT LEAST 48 HOURS IN ADVANCE OF THE SCHEDULED DATE OF THE VIDEO INSPECTION.
33. RESURFACE ALL TRENCHES WITHIN PAVED AREAS PER CITY OF MENIFEE STANDARD PLAN NO. 812. FULL COMPLIANCE WITH THE CITY OF MENIFEE STREET OPENING AND PAVEMENT RESTORATION REGULATIONS WILL BE REQUIRED.
34. VIDEO RECORDING. CONTRACTOR SHALL SUBMIT VIDEO RECORDING OF MAINLINE TRUNKS ALONG WITH AUDIO DETAILING THE SIZE, START AND END STATION AND SD MANHOLE NUMBER PRIOR TO FINAL SURFACE PAVING.

TOTAL DISTURBED AREA

TOTAL SITE DISTURBED AREA = 86.03 ACRES

GRADING QUANTITIES

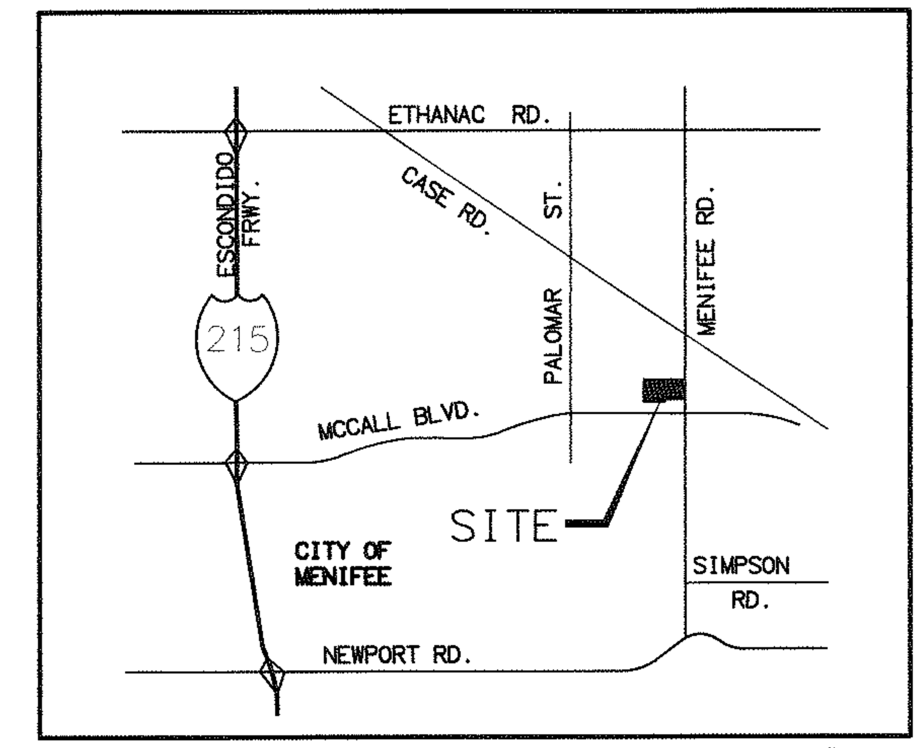
GRADED AREA	86.03 ACRES	MAX. CUT DEPTH	31.40 FT
CUT QUANTITIES	200,566 CY	MAX CUT SLOPE RATIO (2:1MAX)	2H:1V
FILL QUANTITIES	173,896 CY	MAX. FILL DEPTH	14.27 FT
IMPORT/EXPORT	26,671 CY	MAX FILL SLOPE RATIO (2:1MAX)	2H:1V

THIS PROJECT PROPOSES TO EXPORT 26,671 CUBIC YARDS OF MATERIAL FROM THIS SITE. ALL EXPORT MATERIAL SHALL BE DISCHARGED TO A LEGAL DISPOSAL SITE. THE APPROVAL OF THIS PROJECT DOES NOT ALLOW PROCESSING AND SALE OF THE MATERIAL. ALL SUCH ACTIVITIES REQUIRE A SEPARATE CONDITIONAL USE PERMIT.

DECLARATION OF RESPONSIBLE CHARGE

I HEREBY DECLARE THAT I AM THE ENGINEER OF RECORD FOR THIS PROJECT AND THAT THE DESIGN OF THE IMPROVEMENTS SHOWN ON THESE PLANS COMPLIES WITH ALL PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. I ASSUME FULL RESPONSIBILITY FOR ALL ASPECTS OF THE DESIGN OF THE IMPROVEMENTS. WITH RESPECT TO THE PLAN CHECK PERFORMED BY THE CITY OF MENIFEE, I UNDERSTAND AND ACKNOWLEDGE THE FOLLOWING: (1) THE PLAN CHECK IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH THE CITY'S STANDARDS, PROCEDURES, POLICIES, AND ORDINANCES; (2) THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS; AND, (3) THE PLAN CHECK DOES NOT RELIEVE ME OF MY LEGAL AND PROFESSIONAL RESPONSIBILITY FOR THE DESIGN OF THE IMPROVEMENTS. TO THE FULL EXTENT PERMITTED BY LAW, I AGREE TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS ELECTED OFFICIALS, EMPLOYEES, AND AGENTS FROM ANY AND ALL ACTUAL OR ALLEGED CLAIMS, DEMANDS, CAUSES OF ACTION, LIABILITY, LOSS, DAMAGE, OR INJURY TO PROPERTY OR PERSONS, INCLUDING WRONGFUL DEATH, WHETHER IMPOSED BY A COURT OF LAW OR BY ADMINISTRATIVE ACTION OF ANY FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCY, ARISING OUT OF OR INCIDENT TO ANY NEGLIGENT ACTS, OMISSIONS, OR ERRORS BY THE ENGINEER OF RECORD, ITS EMPLOYEES, CONSULTANTS, OR AGENTS.

FRANCISCO MARTINEZ JR — 12/4/19
DATE



VICINITY MAP
SEC 23, T.05S, R.23W

OWNER/DEVELOPER
LENNAR HOMES
980 MONTECITO DRIVE, SUITE 302
CORONA, CA 92879
PH: (951) 817-3568

ENGINEER
FMCIVIL ENGINEERS, INC.
29995 TECHNOLOGY DR, SUITE 306
MURRIETA, CA 92563
PH: (951) 973-0201

SOILS ENGINEER
ALTA CALIFORNIA GEOTECHNICAL INC.
170 NORTH MAPLE STREET, SUITE 108
CORONA, CA 92880
PH: (951) 509-7090

BENCHMARK
DVR 23 EL=1469.76' NAVD88

1-3/8" BRASS DISK STAMPED "MWD BM DVR 23 1991" SET IN WINGWALL. LOCATED 260 FEET SOUTH OF OLIVE AVE., AND 40 FEET EAST OF WINCHESTER ROAD.

TOPOGRAPHY SOURCE
INLAND AERIAL SURVEYS, INC.
7117 ARLINGTON AVE., SUITE A
RIVERSIDE, CA 92503

TOPO SOURCE METHOD: PHOTOGRAMMETRY
TOPO SOURCE DATE: OCTOBER 1, 2018

BASIS OF BEARINGS
THE CALIFORNIA STATE PLANE COORDINATE SYSTEM 1983 ZONE 6, 2007.00 EPOCH, BASED LOCALLY ON CONTROL STATIONS "BILL" AND "P477", NAD 83 (NSRS2011) BEING NORTH 28°53'23.27" EAST

LEGAL DESCRIPTION
LOTS 933 THROUGH 942, INCLUSIVE, LOTS 960 THROUGH 963, INCLUSIVE AND LOTS 972 THROUGH 975, INCLUSIVE OF ROMOLA FARMS NO. 10 IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, AS SHOWN BY MAP ON FILE IN BOOK 15, PAGES 29, 30 AND 31 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

ASSESSORS PARCEL NUMBER
333-070-069, 333-070-070, 333-070-071, 333-070-075, 333-070-080, 333-070-081, 333-070-082

WORK TO BE DONE
THE IMPROVEMENTS CONSIST OF THE FOLLOWING WORK TO BE DONE ACCORDING TO THESE PLANS AND THE SPECIFICATIONS AND STANDARD DRAWINGS OF THE CITY OF MENIFEE.

STANDARD SPECIFICATIONS:

DESCRIPTION

1. CITY OF MENIFEE STANDARD SPECIFICATIONS, 2019 EDITION
2. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK), LATEST EDITION
3. CALIFORNIA DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 2014 EDITION
4. CALIFORNIA DEPARTMENT OF TRANSPORTATION U.S CUSTOMARY STANDARD SPECIFICATIONS, LATEST EDITION

STANDARD DRAWINGS:

DESCRIPTION

1. CITY OF MENIFEE STANDARD DRAWINGS, 2019 EDITION
2. COUNTY OF RIVERSIDE STANDARD DRAWINGS

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX MAP
3	SECTIONS, NOTES & DETAILS
4-29	STREET-PLAN AND PROFILE
30-38	STORM DRAIN-PLAN AND PROFILE
39	STORM DRAIN-LATERAL PROFILES
40-42	CHANNEL PLAN AND PROFILE
43	CHANNEL LATERAL PROFILES
44-48	DETAIL SHEETS
49	LOW FLOW DRAINAGE SYSTEM
50	WQ BASIN UNDERDRAINS
51	MODULAR WETLAND DETAILS

Call before you Dig
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Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER — FRANCISCO MARTINEZ JR — C-84640 — CIVIL — STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH — RCE 61253 — EXP. 6/30/21 — 12.5.19 DATE
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RECOMMENDED BY: — 12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

TITLE SHEET

SHEET NO. 1 OF 51

PROJECT NO: IP19-006S

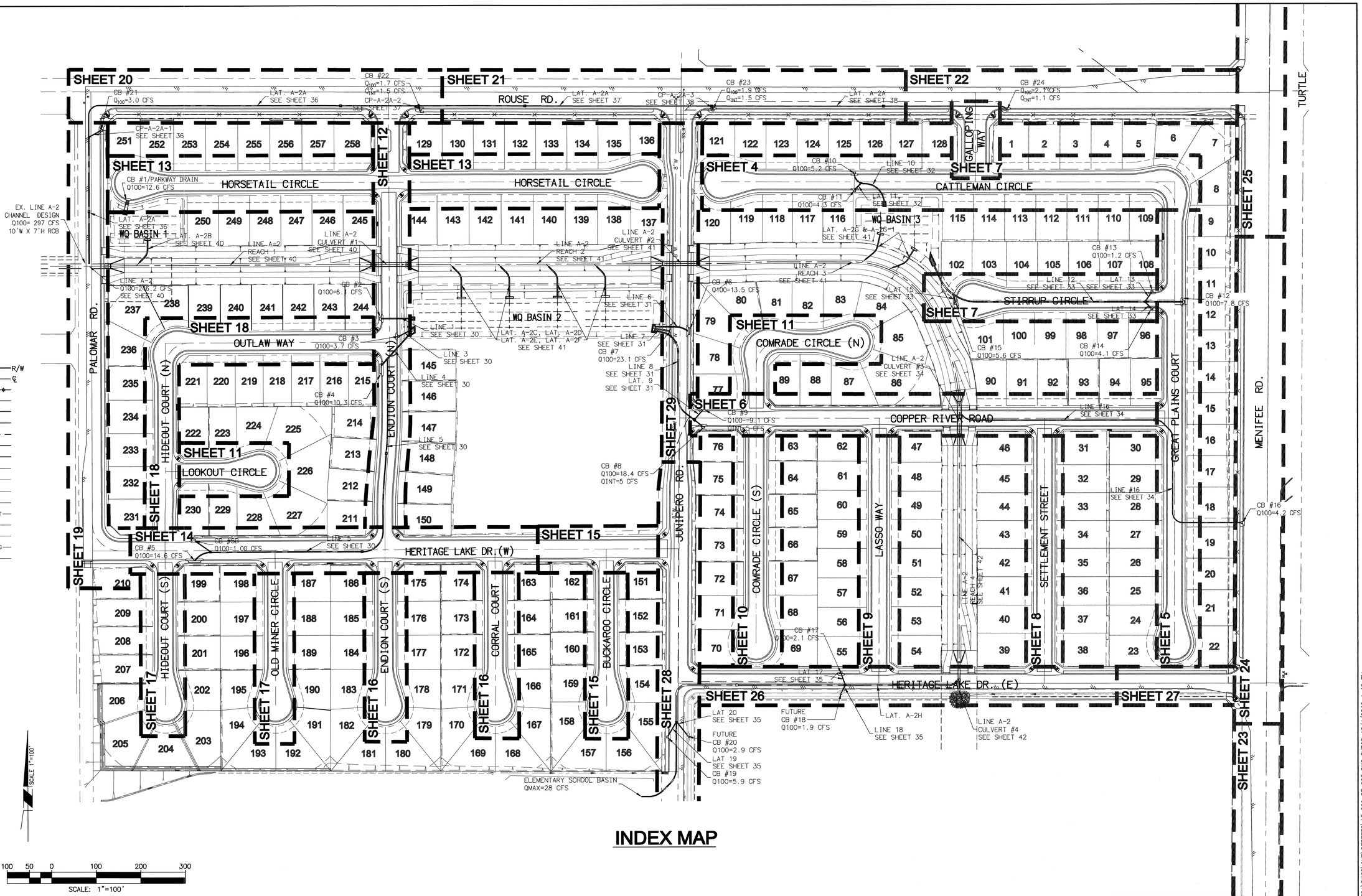
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ABBREVIATIONS

BC	-	BEGINING OF CURVE
BCC	-	BEGINNING OF COMPOUND CURVE
BRC	-	BEGINNING OF REVERSE CURVE
BCR	-	BEGINNING OF CURB RETURN
CB	-	CATCH BASIN
C&G	-	CURB & GUTTER
℄	-	CENTERLINE
CF	-	CURB FACE
ECR	-	END OF CURB RETURN
EC	-	END OF CURVE
EG	-	EXISTING GRADE
EP	-	EDGE OF PAVEMENT
EX	-	EXISTING
FG	-	FINISHED GROUND
FL	-	FLOW LINE
FO	-	FIBER OPTIC
FS	-	FINISHED SURFACE
GB	-	GRADE BREAK
LF	-	LINEAR FEET
NAT	-	NATURAL GROUND
OC	-	ON CURB
PB	-	PULL BOX
PP	-	POWER POLE
PROP	-	PROPOSED
R/W	-	RIGHT OF WAY
SD	-	STORM DRAIN
S/W	-	SIDEWALK
TC	-	TOP OF CURB
TEL	-	TELEPHONE
U/G	-	UNDERGROUDND
VAR	-	VARIES
VIF	-	VERIFY IN FIELD
PIP	-	PROTECT IN PLACE

LEGEND

- RIGHT OF WAY — R/W
- CENTERLINE — ℄
- DAYLIGHT
- EXIST. RIGHT OF WAY
- EXIST. CENTERLINE
- EXIST. TOP OF CURB
- CUT/FILL LINE
- FENCE
- SAWCUT
- PROPOSED CONTOUR — 880
- EXIST. CONTOUR — 880
- EXIST. ELECTRIC — E
- EXIST. OVERHEAD ELECTRIC — E
- EXIST. TELEPHONE — T
- EXIST. FIBER OPTIC — FO
- EXIT. FORCE MAIN — FM
- EXIST. GAS — G
- EXIST. WATER LINE — W
- PROP. AC PAVEMENT
- EXIST. AC REMOVAL
- GRIND & OVERLAY EXIST. PAVEMENT
- RIP RAP
- WQ SOIL MEDIA
- WQ GRAVEL MEDIA



INDEX MAP

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

100 50 0 100 200 300
SCALE: 1"=100'

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT

JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE

RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

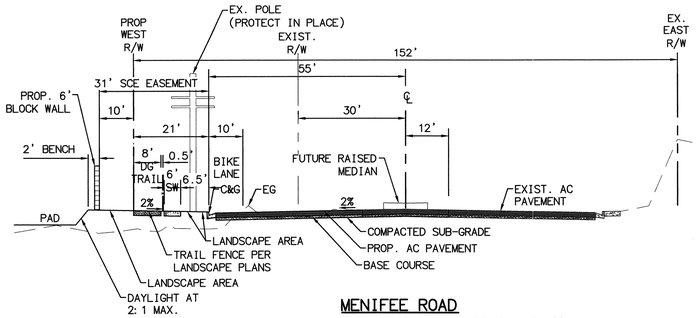
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

INDEX MAP

SHEET NO. 2 OF 51

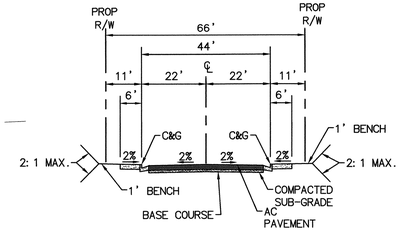
PROJECT NO: IP19-006S

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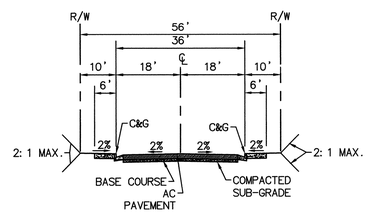
MENIFEE ROAD

URBAN ARTERIAL HIGHWAY, CITY OF MENIFEE STD. NO. 96
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=11, MIN. SECTION = 6"AC OVER 10"AB
NTS



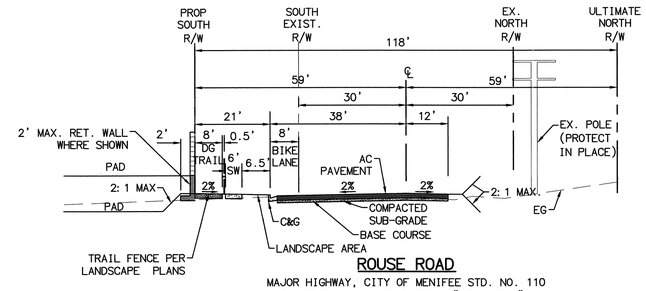
HERITAGE LAKE DRIVE (WEST)

WEST OF JUNIPERO ROAD TO PALOMAR ROAD
ENHANCED LOCAL STREET,CITY OF MENIFEE STD. NO. 114
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
NTS



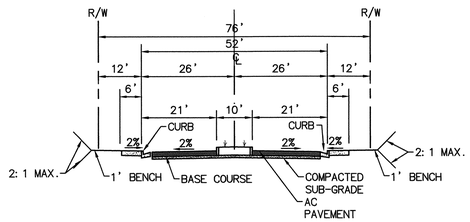
STREET "C" TO "W"

GENERAL LOCAL STREET, CITY OF MENIFEE STD. NO. 115
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=5.5, MIN. SECTION = 4"AC OVER 6"AB
NTS



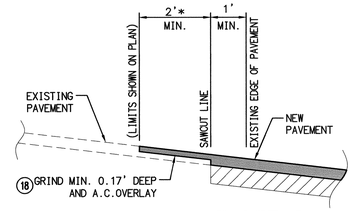
ROUSE ROAD

MAJOR HIGHWAY, CITY OF MENIFEE STD. NO. 110
MIN. TI=10, MIN. SECTION = 6"AC OVER 8"AB
NTS



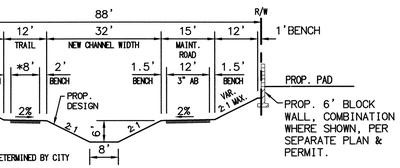
JUNIPERO ROAD (ENTRY)

COLLECTOR STREET, CITY OF MENIFEE STD. NO. 113
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
NTS



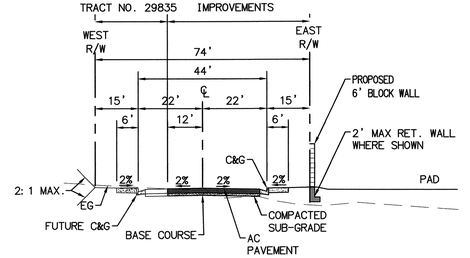
17 AC SAWCUT JOINT DETAIL

*2' MIN. OVERLAY AT ALL SAWCUT JOINTS OR
AS DIRECTED BY THE CITY PUBLIC WORKS/ENGINEERING INSPECTOR



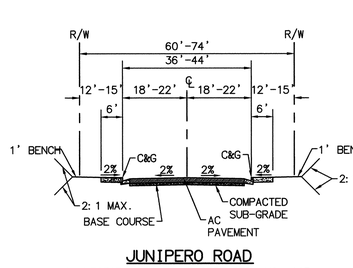
88' CHANNEL SECTION

NTS



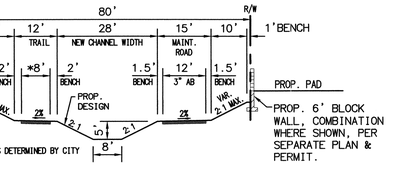
PALOMAR ROAD

ENHANCED LOCAL STREET, CITY OF MENIFEE STD. NO. 113
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
NTS



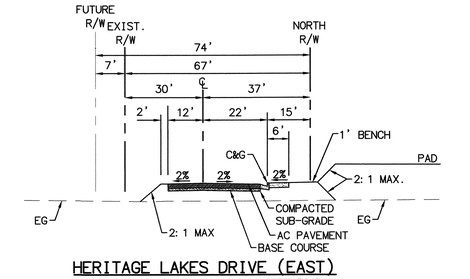
JUNIPERO ROAD

COLLECTOR,CITY OF MENIFEE STD. NO. 113
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
GENERAL LOCAL STREET, CITY OF MENIFEE STD. NO 115
MIN. TI=5.5, MIN. SECTION = 4"AC OVER 6"AB
NTS



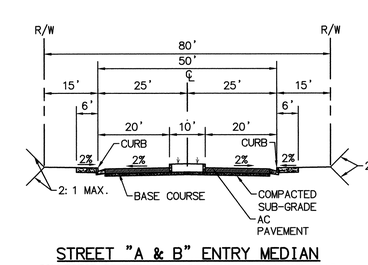
80' CHANNEL SECTION

NTS



HERITAGE LAKES DRIVE (EAST)

EAST OF JUNIPERO ROAD TO MENIFEE ROAD
ENHANCED LOCAL STREET, CITY OF MENIFEE NO. 113
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
NTS



STREET "A & B" ENTRY MEDIAN

COLLECTOR STREET, CITY OF MENIFEE STD. NO. 113
(MODIFIED PER CONDITIONS OF APPROVAL)
MIN. TI=8, MIN. SECTION = 5"AC OVER 6"AB
NTS

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

STREET CONSTRUCTION NOTES	QTY	UNIT
1 CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT	407,095	SF
2 CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT	175,827	SF
3 CONSTRUCT 6" A.C. PAVEMENT OVER 8" A.B., OR PER SOILS REPORT	132,362	SF
4 CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200	28,802	LF
5 CONSTRUCT 6" A.C. PAVEMENT OVER 10" A.B., OR PER SOILS REPORT	94,702	SF
6 CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201	3,877	LF
7 CONSTRUCT 6" TYPE 6A CURB PER CITY OF MENIFEE STD. PLAN NO. 202	227	LF
8 CONSTRUCT 8" TYPE 8A CURB PER CITY OF MENIFEE STD. PLAN NO. 203	139	LF
9 CONSTRUCT 8" AC DIKE PER CITY OF MENIFEE STD. PLAN NO. 204	101	LF
10 CONSTRUCT RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206	16	EA
11 CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209	19	EA
12 CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400	196,073	SF
15 CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405	47	EA
16 ADJUST MANHOLE TO GRADE PER CITY OF MENIFEE STD. PLAN NO. 814.	7	EA
17 AC SAWCUT JOINT PER DETAIL SHOWN ON SHEET 2	3,079	LF
18 GRIND AND OVERLAY EXISTING PAVEMENT (1.5" GRIND AND 1" OVERLAY) OR AS DIRECTED BY CITY ENGINEER/INSPECTOR	6,167	SF
19 REMOVE EXISTING AC PAVEMENT	341	SF
20 INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817	16	EA
24 CONSTRUCT CURB OUTLET PER CITY OF MENIFEE STD. PLAN NO. 304.	1	EA

STORM DRAIN CONSTRUCTION NOTES	QTY	UNIT
1 INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	3,244	LF
2 INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	1,437	LF
3 INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	1,246	LF
4 INSTALL 36" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	603	LF
5 CONSTRUCT J.S. NO. 2 PER R.C.F.C. & W.C.D STD. DWG. NO. JS 227.	5	EA
7 CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.	10	EA
8 CONSTRUCT M.H. NO. 2 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 252.	1	EA
9 CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).	22	EA
10 CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.	18	EA
11 CONSTRUCT HEADWALL (WING AND U TYPE) AND FOREBAY PER DETAIL ON SHEET 48.	5	EA
13 CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86A, SEE DETAIL ON SHEET 47.	7	EA
14 CONSTRUCT J.S. NO. 8 PER R.C.F.C. W.C.D. STD. DWG. NO. JS 233.	7	EA
15 CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE B.	5	EA
16 CONSTRUCT SINGLE RCB 4'H X 8'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.	236	LF
17 CONSTRUCT J.S. NO. 3 PER R.C.F.C W.C.D. STD. DWG. NO. JS 228.	2	EA
19 CONSTRUCT SINGLE RCB 7'H X 10'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.	14	LF
20 CONSTRUCT CONCRETE BULKHEAD PER R.C.F.C. & W.C.D. STD. DWG. NO. M816.	0	EA
21 INSTALL 24" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	78	LF
22 INSTALL 30" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	77	LF
23 INSTALL 36" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	206	LF
24 CONSTRUCT T.S. NO. 3 PER R.C.F.C. & W.C.D. STD. DWG. NO. TS 303.	3	EA
25 CONSTRUCT PRESSURE M.H. NO. 2 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 252.	2	EA
26 CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86B, SEE DETAIL ON SHEET 45.	1	EA
27 CONSTRUCT CATCH BASIN CURB INLET TYPE B-2 PER DETAIL ON SHEET 44.	1	EA
28 CONSTRUCT BIO-CLEAN MWS-L-4-8-V PER DETAILS ON SHEET 51.	1	EA
29 CONSTRUCT BIO-CLEAN MWS-L-8-20-V PER DETAILS ON SHEET 51.	1	EA
30 CONSTRUCT BIO-CLEAN MWS-L-8-12-V PER DETAILS ON SHEET 51.	1	EA
31 CONSTRUCT MODULAR TROUGH DIVERSION (DVERT) SYSTEM PER BIO CLEAN STD. DETAIL ON SHEET 46 & 51.	6	EA
32 CONSTRUCT INLET TYPE X PER RIVERSIDE COUNTY FLOOD CONTROL DISTRCIT STD. DWG. CB 108.	2	EA
33 CONSTRUCT CONCRETE DROP INLET/OUTLET CONTROL PER RIVERSIDE COUNTY FLOOD CONTROL DISTRCIT STD. DWG. CB 110.	7	EA
34 CONSTRUCT CURB OPENING PER DETAIL ON SHEET 48. OUTLET SHALL DRAIN AT 1/4": 1' MIN. AWAY FROM CURB & GUTTER (WIDTH PER PLAN)	1	EA
35 INSTALL 8" PVC SDR-17 PIPE OR APPROVED EQUAL.	2250	LF
36 INSTALL PVC PIPE FITTING PER PLAN (SCH 80, SIZE AND TYPE SHOWN PER PLAN).	23	EA
37 INSTALL TERMINAL CLEANOUT STRUCTURE PER SPPWC STD. PLAN NO. 204-2.	8	EA
38 INSTALL 60" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.	73	LF
39 CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 47.	1	EA
40 CONSTRUCT CONCRETE "U" CHANNEL PER DETAIL ON SHEET 48.	1	EA
41 INSTALL 3" CLASS II AGGREGATE BASE OVER 90% COMPACTED NATIVE	327	CY

RCB NOTE

THE CONCRETE BOX STORM DRAIN SHALL BE PRE-CAST REINFORCED CONCRETE BOX PER CALTRANS STANDARD D83A AND D83B, CONFORMING TO AASHTO M273 (OR EQUIVALENT ASTM C850) WITH LESS THAN 2 FEET OF COVER SUBJECT TO HS20 LIVE LOADING, TABLE 1. ALTERNATIVELY, THE CAST-IN-PLACE METEHOD OF CONSTRUCTION CONFORMING TO THE LATEST EDITION OF CALTRANS STANDARD D80 WITH FLAT INVERT MAY BE USED IF APPROVED BY THE ENGINEER.

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12-5-19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

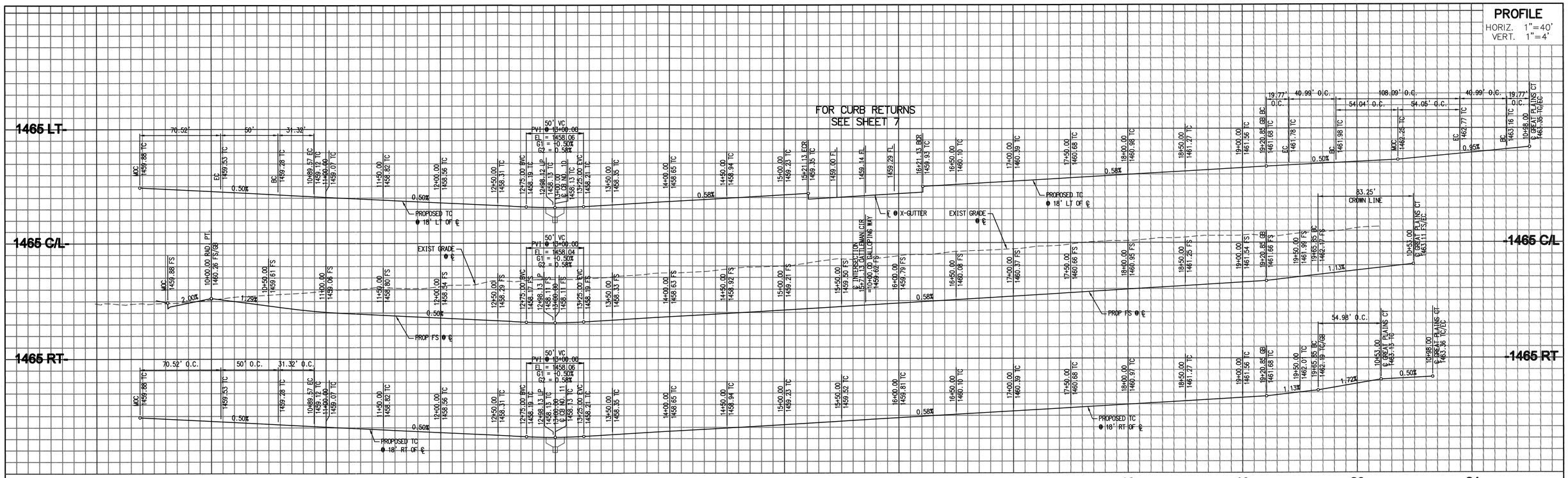
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

NOTES, SECTIONS & DETAILS

SHEET NO. 3 OF 51

PROJECT NO: IP19-006S

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CATTLEMAN CIRCLE

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°51'20"W	--	1018.85'	--	CENTERLINE
2	N89°51'20"W	--	431.58'	--	6" C&G
3	16°18'41"	110.00'	31.32'	15.76'	6" C&G
4	N73°32'39"W	--	50.00'	--	6" C&G
5	212°37'22"	38.00'	141.02'	--	6" C&G
6	N73°49'59"E	--	50.00'	--	6" C&G
7	16°18'41"	110.00'	31.32'	15.76'	6" C&G
8	N89°51'20"W	--	876.30'	--	6" C&G

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
9	90°00'00"	35.00'	54.98'	35.00'	6" C&G
10	N89°51'20"W	--	299.72'	--	6" C&G
11	10°17'48"	110.00'	19.77'	9.91'	6" C&G
12	N79°50'51"E	--	40.99'	--	6" C&G
13	110°35'38"	56.00'	108.09'	80.87'	6" C&G
14	N10°26'29"E	--	40.99'	--	6" C&G
15	10°17'48"	110.00'	19.77'	9.91'	6" C&G
16	90°00'00"	53.00'	83.25'	53.00'	CROWN

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19
DATE
RECOMMENDED BY:
12/5/19
DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

CATTLEMAN CIRCLE - STA. 10+00.00 TO 20+18.85
GREAT PLAINS CT - STA. 10+00.00 TO 10+98.00

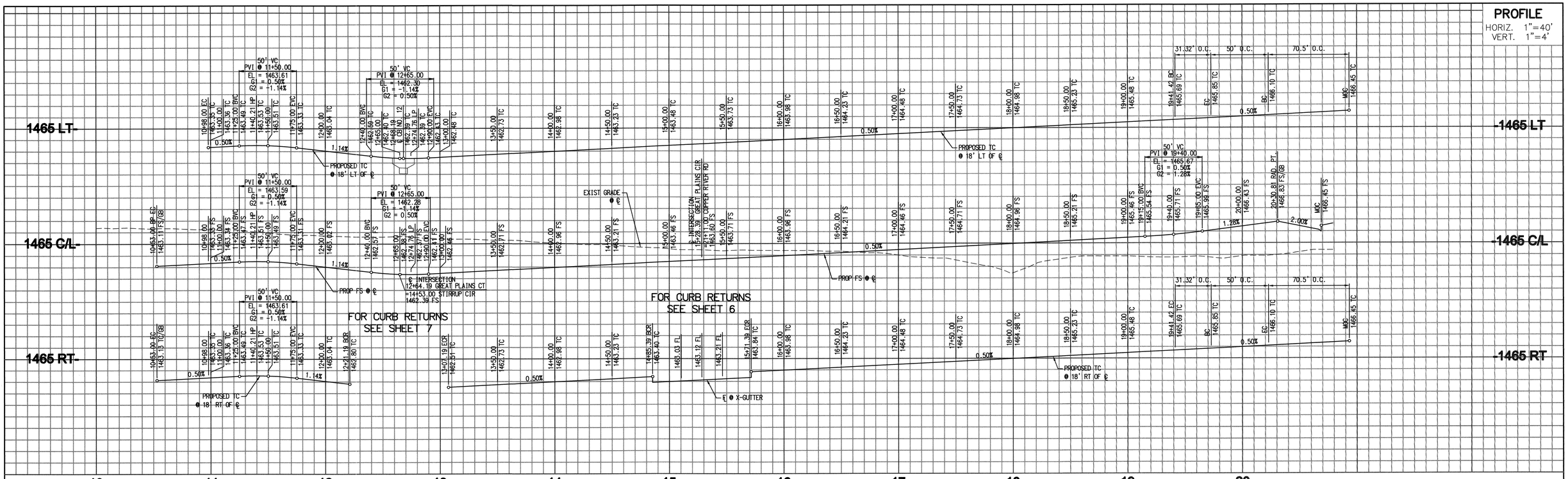
SHEET NO. 4 OF 51

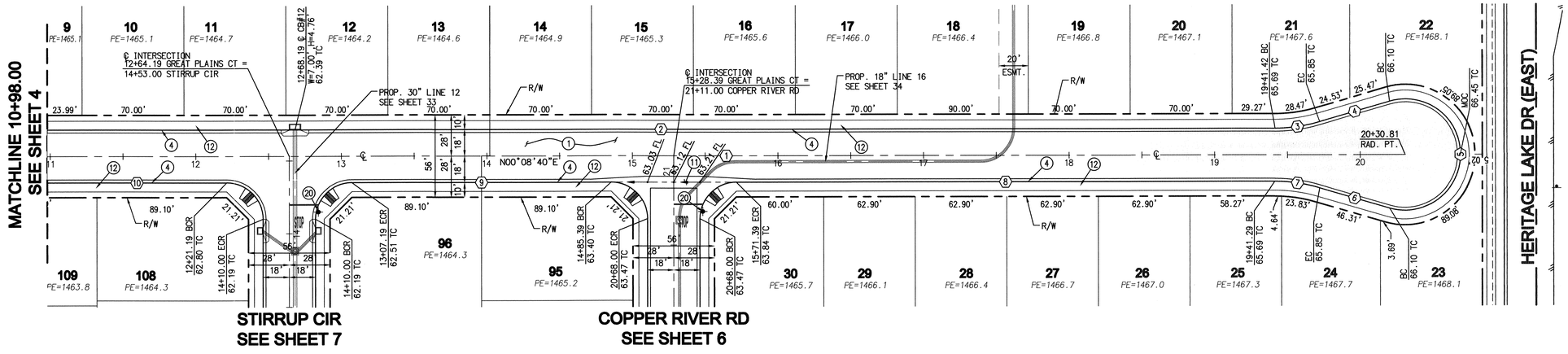
PROJECT NO: IP19-006S

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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'





SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°08'40"E	--	932.81'	--	CENTERLINE
2	N00°08'40"E	--	843.25'	--	6" C&G
3	16°18'41"	110.00'	31.32'	15.76'	6" C&G
4	N16°10'01"W	--	50.00'	--	6" C&G
5	212°37'23"	38.00'	141.02'	--	6" C&G
6	N16°27'21"E	--	50.00'	--	6" C&G
7	16°18'41"	110.00'	31.32'	15.76'	6" C&G
8	N00°08'40"E	--	369.90'	--	6" C&G
9	N00°08'40"E	--	178.19'	--	6" C&G
10	N00°08'40"E	--	123.20'	--	6" C&G

GREAT PLAINS COURT

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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FMCIVIL ENGINEERS INC.
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MURRIETA | CA 92563
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PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
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APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT

JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21

12.5.19
DATE

RECOMMENDED BY:

12/5/19
DATE

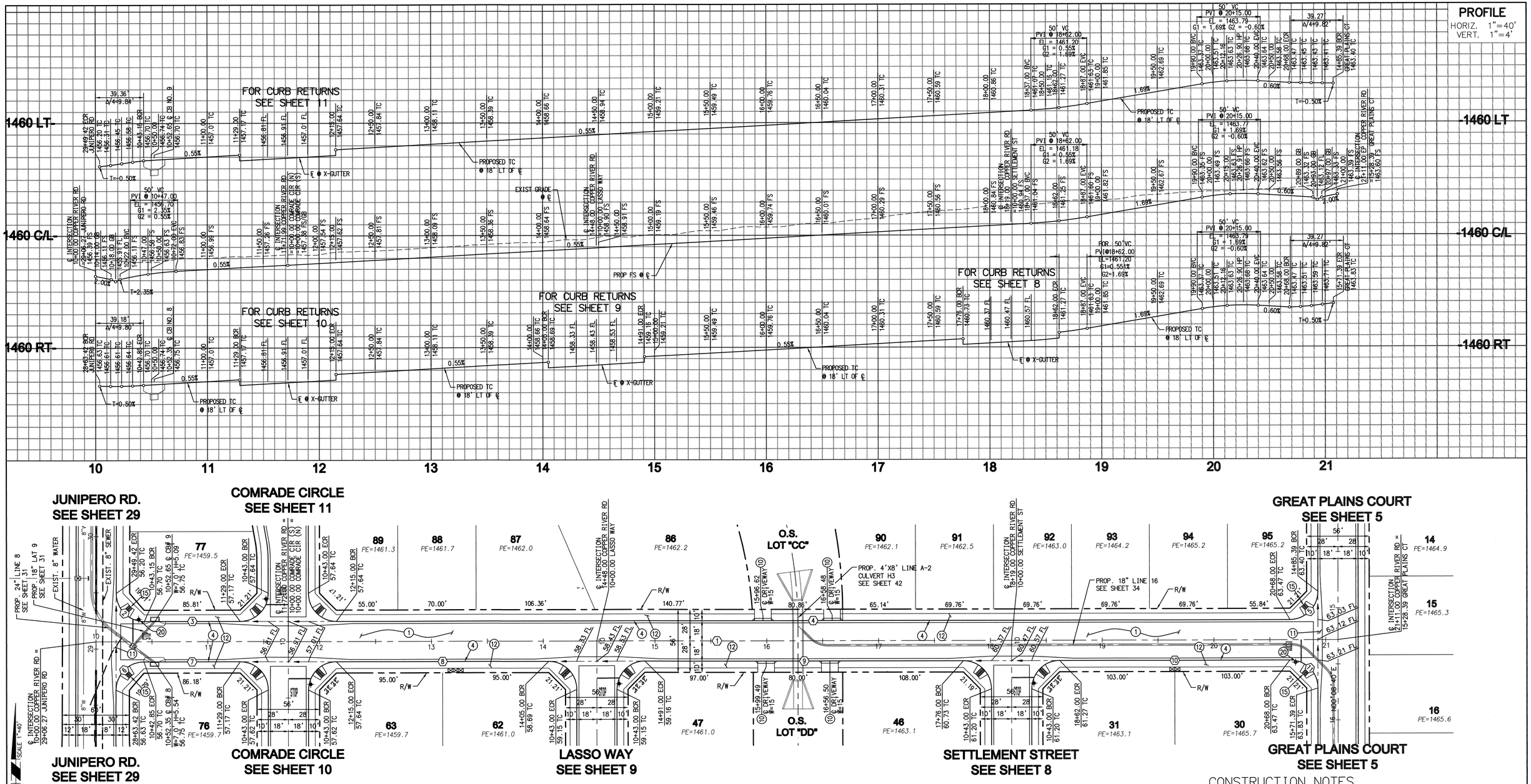
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
GREAT PLAINS COURT
STA. 10+98.00 TO 20+30.81

SHEET NO. 5 OF 51

PROJECT NO: IP19-006S

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COPPER RIVER ROAD

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°51'20"W	--	1111.00'	--	CENTERLINE
2	90°11'44"	25.00'	39.36'	25.09'	CURB RETURN
3	N89°51'20"W	--	85.85'	--	6" C&G
4	N89°51'20"W	--	853.00'	--	6" C&G
5	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
6	89°48'16"	25.00'	39.18'	24.91'	CURB RETURN

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
7	N89°51'20"W	--	86.14'	--	6" C&G
8	N89°51'20"W	--	190.00'	--	6" C&G
9	N89°51'20"W	--	285.00'	--	6" C&G
10	N89°51'20"W	--	206.00'	--	6" C&G
11	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

NOTE: DRIVEWAY OPENING SHALL NOT BE CLOSER THAN 2' DISTANCE FROM PROPERTY LINE.

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
10. CONSTRUCT MODIFIED (X=2') RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206.
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH, DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — RCE 61253 EXP. 6/30/21 — DATE 12.5.19
RECOMMENDED BY: — DATE 12/5/19

CITY OF MENIFEE ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
COPPER RIVER ROAD
STA. 10+00.00 TO 21+11.00

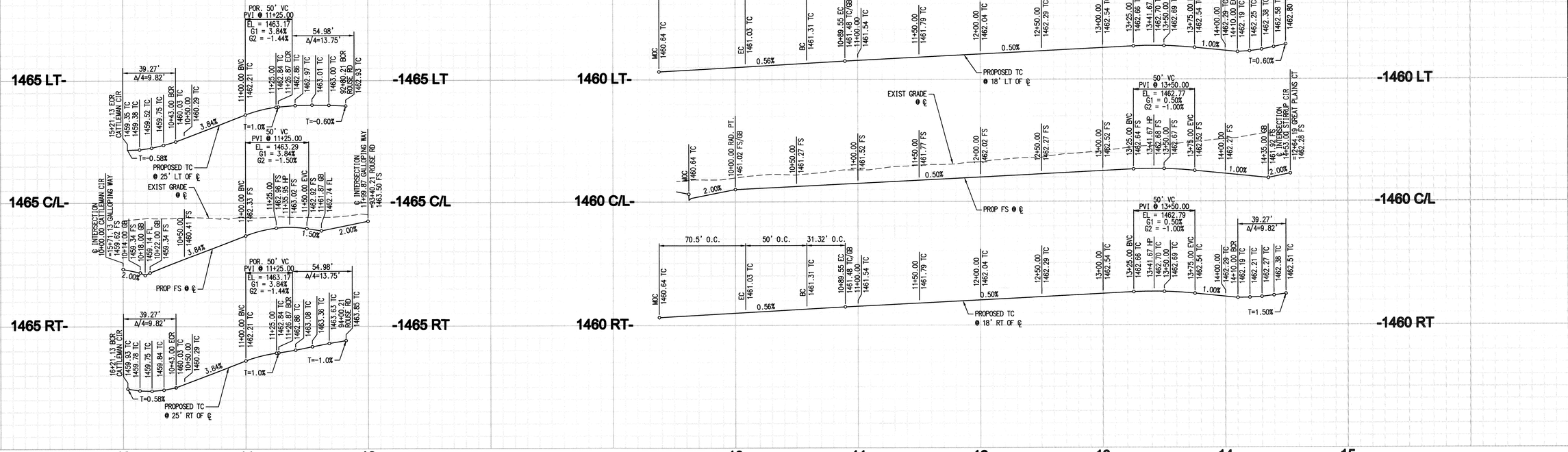
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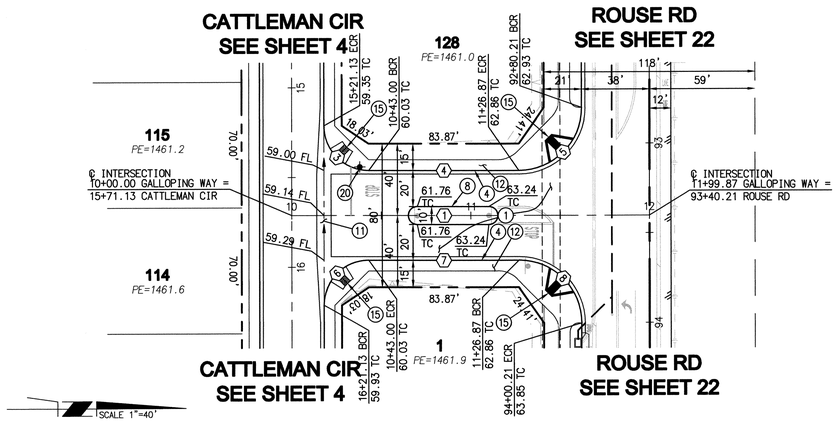
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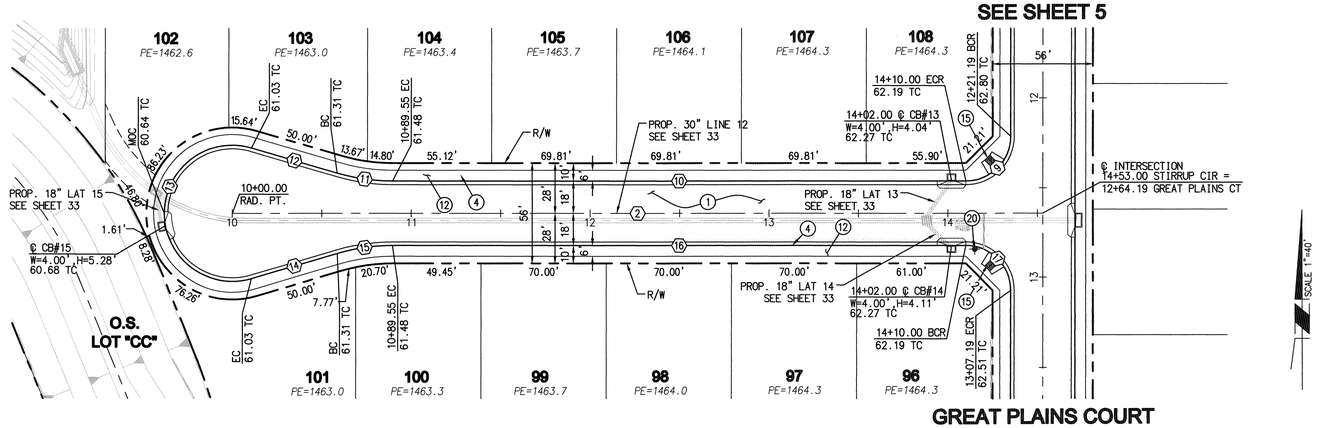
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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'







GALLOPING WAY

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°08'40"E	--	199.87'	--	CENTERLINE
2	N89°51'20"W	--	453.00'	--	CENTERLINE
3	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
4	N00°08'40"E	--	83.87'	--	6" C&G
5	89°59'58"	35.00'	54.98'	35.00'	CURB RETURN
6	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
7	N00°08'40"E	--	83.87'	--	6" C&G
8	90°00'02"	35.00'	54.98'	35.00'	CURB RETURN

STIRRUP CIRCLE

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
9	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
10	N89°51'20"W	--	320.45'	--	6" C&G
11	16°18'42"	110.00'	31.32'	15.76'	6" C&G
12	N73°32'39"W	--	50.00'	--	6" C&G
13	212°37'24"	38.00'	141.02'	--	6" C&G
14	N73°49'59"E	--	50.00'	--	6" C&G
15	343°41'19"	110.00'	659.83'	--	6" C&G
16	N89°51'20"W	--	320.45'	--	6" C&G
17	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
7. CONSTRUCT 6" TYPE 6A CURB PER CITY OF MENIFEE STD. PLAN NO. 202
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

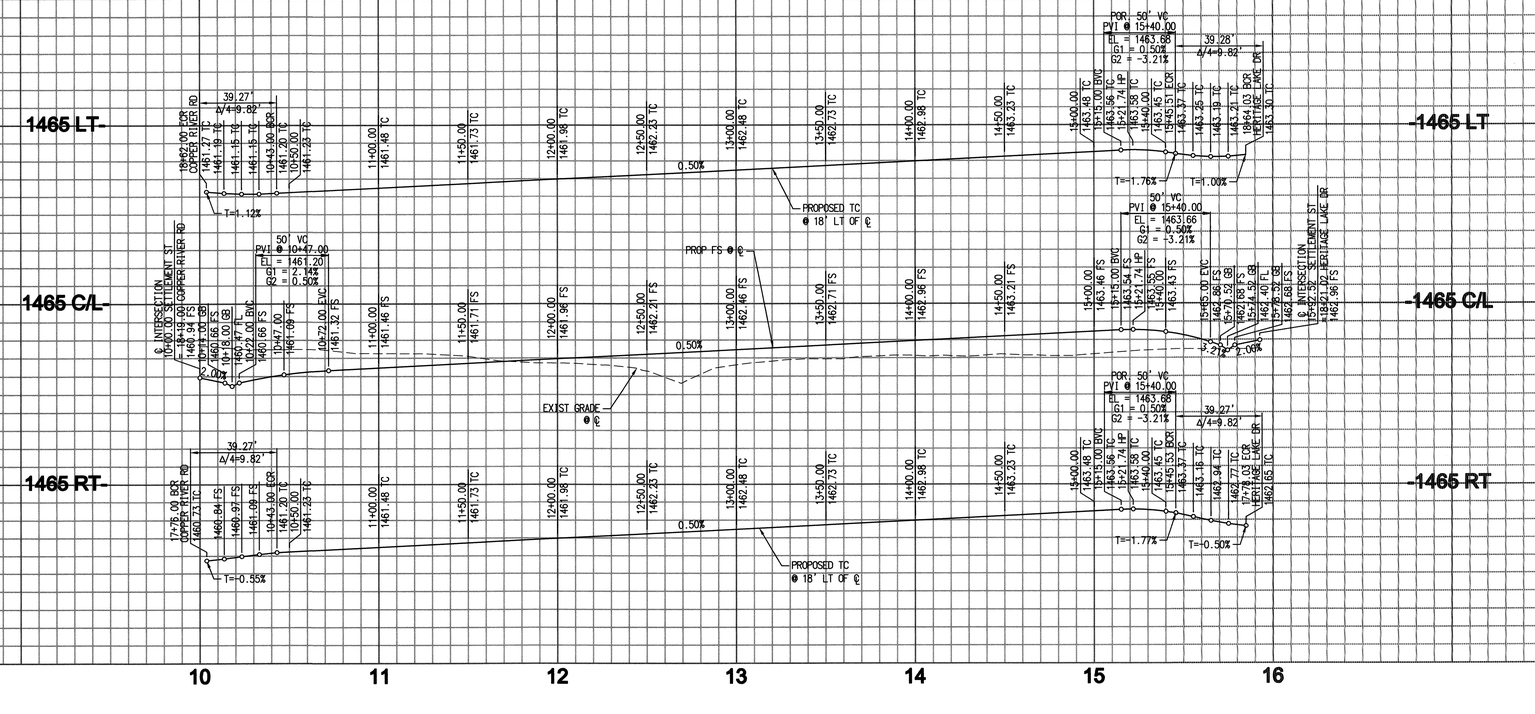
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
GALLOPING WAY - STA. 10+00.00 TO 11+99.87
STIRRUP CIRCLE - STA. 10+00.00 TO 14+53.00

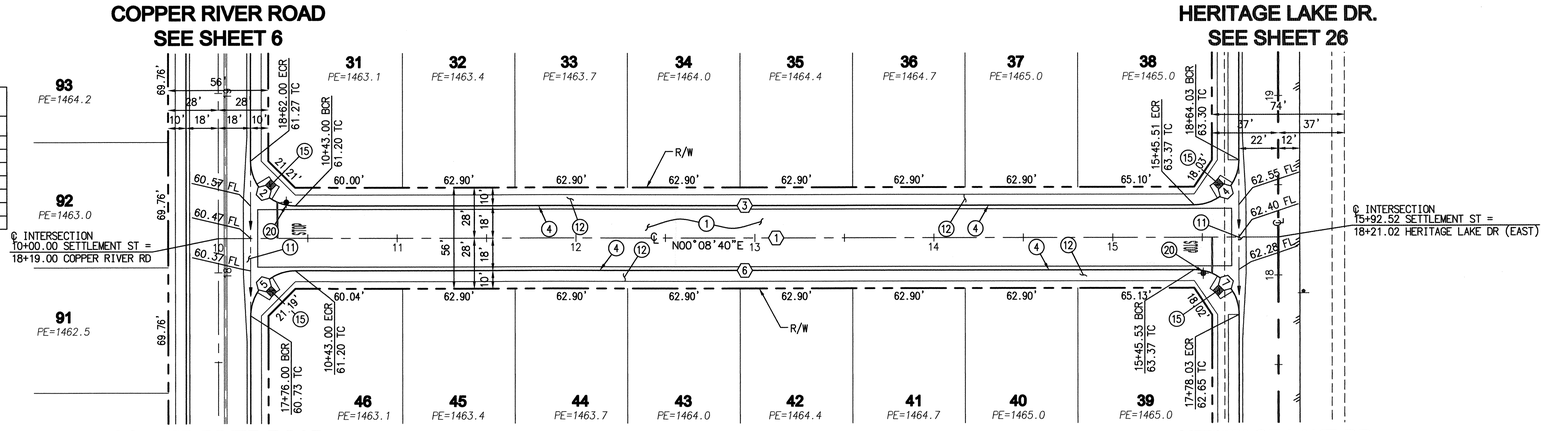
SHEET NO. 7 OF 51

PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'





LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°08'40"E	--	592.52'	--	CENTERLINE
2	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
3	N00°08'40"E	--	502.51'	--	6" C&G
4	90°00'56"	25.00'	39.28'	25.01'	CURB RETURN
5	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
6	N00°08'40"E	--	502.53'	--	6" C&G
7	89°59'04"	25.00'	39.26'	24.99'	CURB RETURN

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

SETTLEMENT STREET

CONSTRUCTION NOTES
(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(11) CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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Avoid cutting underground utility lines. It's easy.
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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
SETTLEMENT STREET
STA. 10+00.00 TO 15+92.52

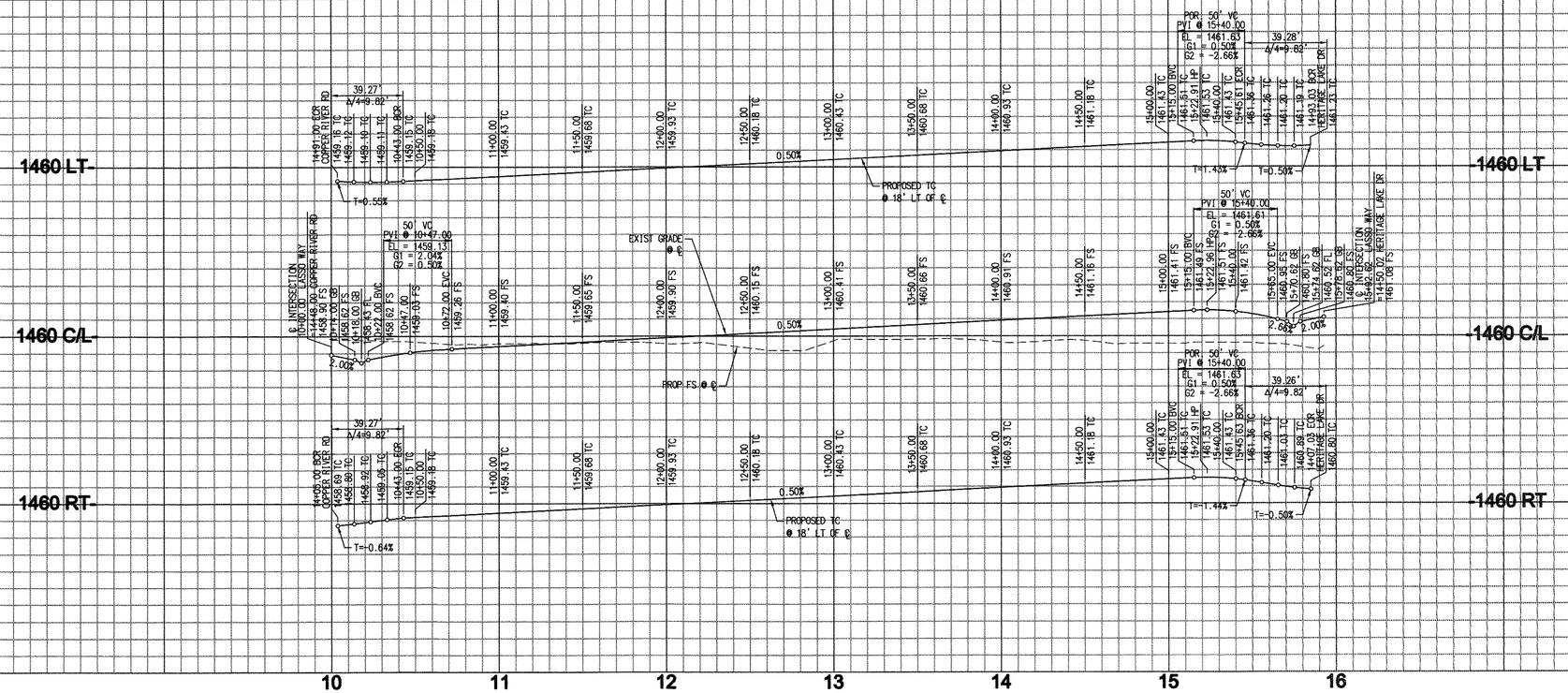
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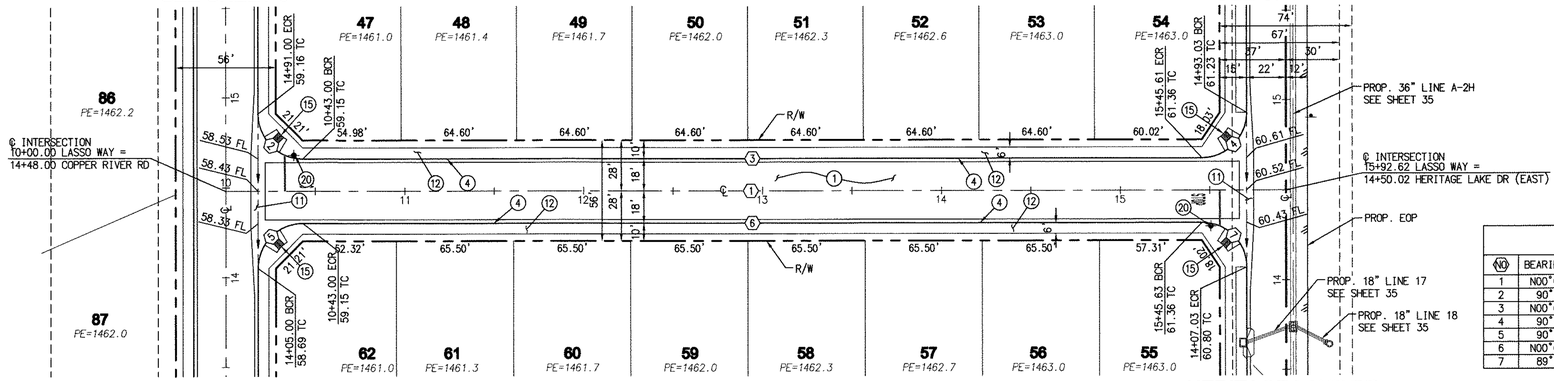
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PRELIMINARY - FOR REVIEW PURPOSES ONLY

PROFILE
HORIZ. 1"=40'
VERT. 1"=4'





LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°08'40"E	---	592.62'	---	CENTERLINE
2	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
3	N00°08'40"E	---	502.61'	---	6" C&G
4	90°00'56"	25.00'	39.28'	25.01'	CURB RETURN
5	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
6	N00°08'40"E	---	502.63'	---	6" C&G
7	89°59'04"	25.00'	39.26'	24.99'	CURB RETURN

SCALE 1"=40'
40 20 0 40 80 120
SCALE: 1"=40'

LASSO WAY

CONSTRUCTION NOTES
(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(11) CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

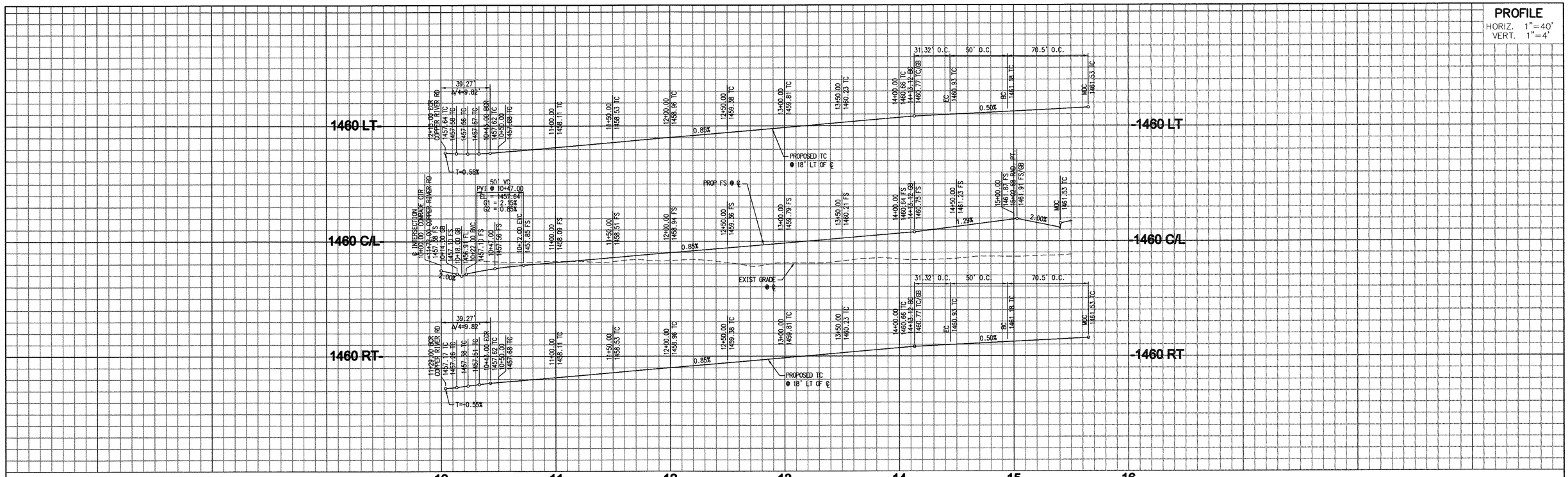
CITY OF MENIFEE ENGINEERING DEPARTMENT

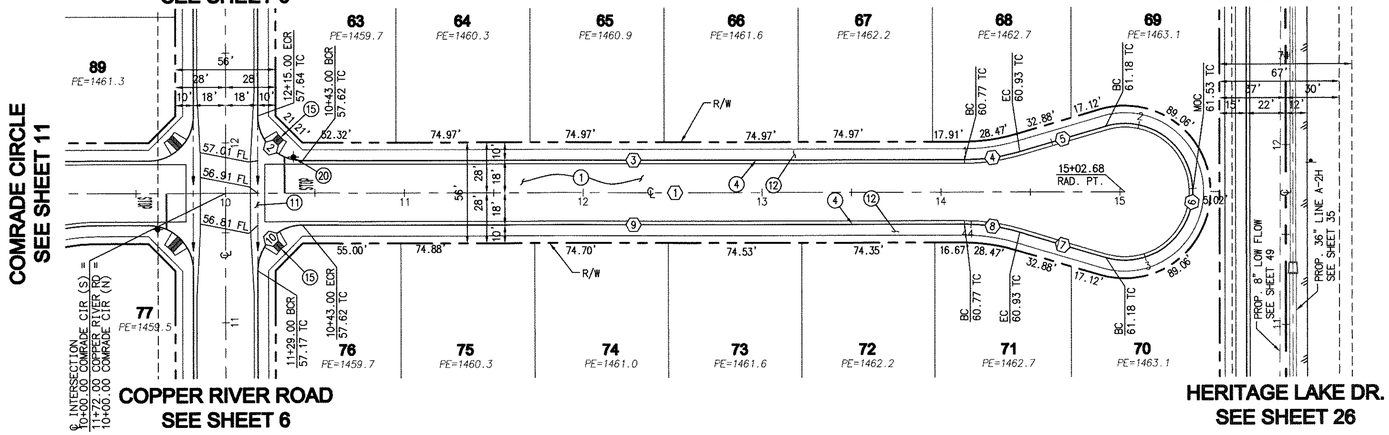
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LASSO WAY
STA. 10+00.00 TO 15+92.62

SHEET NO. 9 OF 51

PROJECT NO: IP19-006S

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LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°08'40"E	---	502.68'	---	CENTERLINE
2	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
3	N00°08'40"E	---	370.12'	---	6" C&G
4	16°18'41"	110.00'	31.32'	15.76'	6" C&G
5	N16°10'01"W	---	50.00'	---	6" C&G
6	212°37'22"	38.00'	141.02'	---	6" C&G
7	N16°27'21"E	---	50.00'	---	6" C&G
8	16°18'41"	110.00'	31.32'	15.76'	6" C&G
9	N00°08'40"E	---	370.12'	---	6" C&G
10	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

COMRADE CIRCLE

CONSTRUCTION NOTES

(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(11) CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
COMRADE CIRCLE
STA. 10+00.00 TO 15+02.68

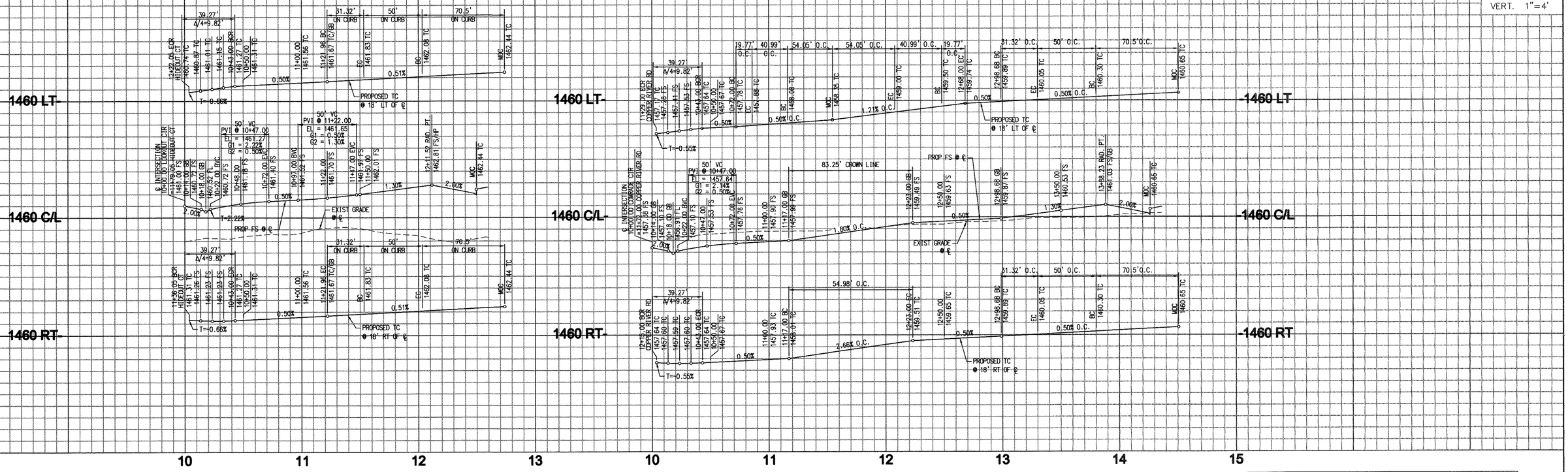
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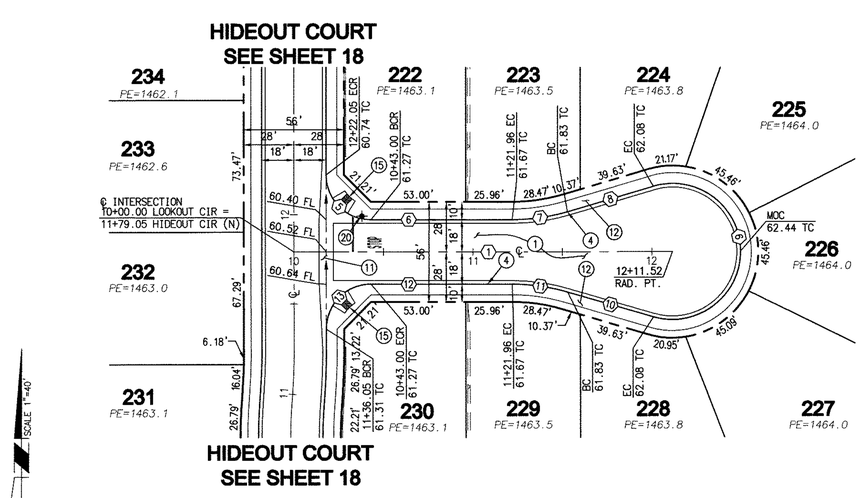
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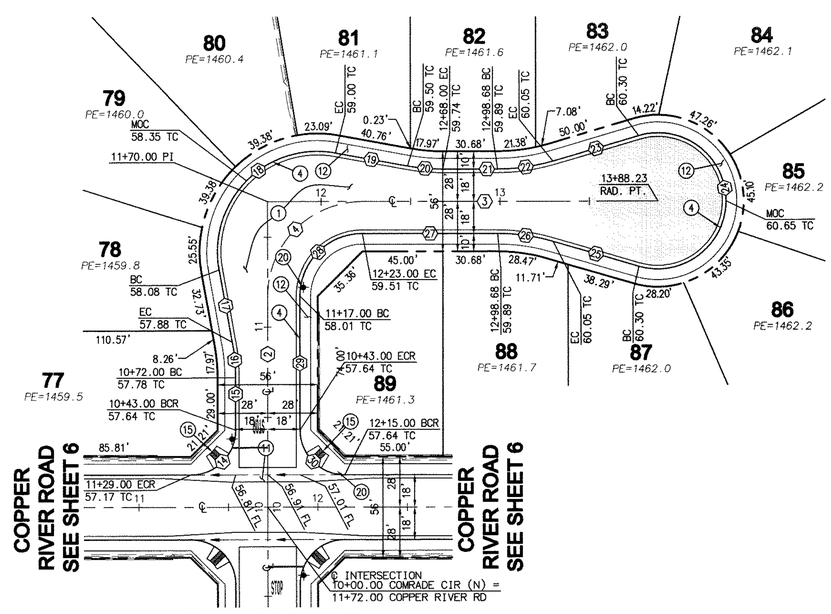
PROFILE

HORIZ. 1"=40'
VERT. 1"=4'





LOOKOUT CIRCLE



COMRADE CIRCLE

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°53'05"E	---	211.52'	---	CENTERLINE
2	N00°08'40"E	---	170.00'	---	CENTERLINE
3	N89°51'20"W	---	218.23'	---	CENTERLINE
4	90°00'00"	53.00'	83.25'	53.00'	CROWN
5	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
6	N89°53'05"E	---	78.96'	---	6" C&G
7	16°18'41"	110.00'	31.32'	15.76'	6" C&G
8	N73°34'24"E	---	50.00'	---	6" C&G
9	212°37'22"	38.00'	141.02'	---	6" C&G
10	N73°48'14"W	---	50.00'	---	6" C&G
11	16°18'41"	110.00'	31.32'	15.76'	6" C&G
12	N89°53'05"E	---	78.96'	---	6" C&G
13	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
14	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
15	N00°08'40"E	---	29.00'	---	6" C&G
16	10°17'50"	110.00'	19.77'	9.91'	6" C&G
17	N10°09'09"W	---	40.99'	---	6" C&G
18	110°35'39"	56.00'	108.09'	80.87'	6" C&G
19	N79°33'31"W	---	40.99'	---	6" C&G
20	10°17'48"	110.00'	19.77'	9.91'	6" C&G
21	N89°51'20"W	---	30.68'	---	6" C&G
22	16°18'42"	110.00'	31.32'	15.76'	6" C&G
23	N73°49'59"E	---	50.00'	---	6" C&G
24	212°37'22"	38.00'	141.02'	---	6" C&G
25	N73°32'39"W	---	50.00'	---	6" C&G
26	16°18'42"	110.00'	31.32'	15.76'	6" C&G
27	N89°51'20"W	---	75.68'	---	6" C&G
28	90°00'00"	35.00'	54.98'	35.00'	6" C&G
29	N00°08'40"E	---	74.00'	---	6" C&G
30	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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Call 811 or 1-800-227-2600

REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT

JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12-5-19 DATE

RECOMMENDED BY:
12/5/19 DATE

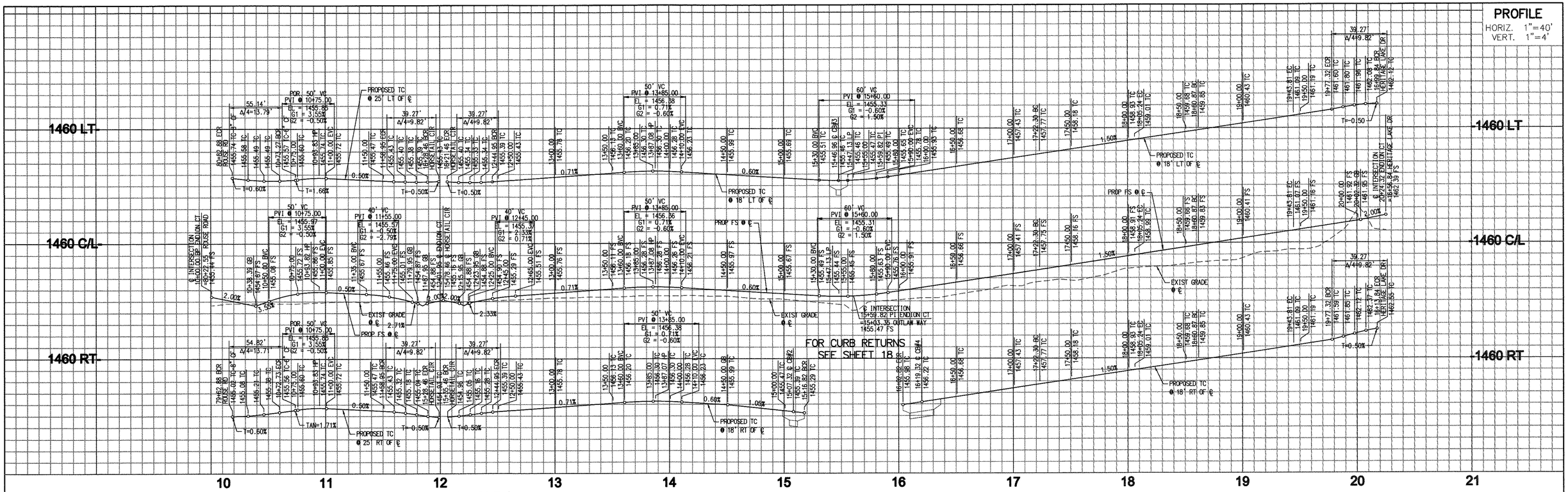
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LOOKOUT CIRCLE - STA. 10+00.00 TO 12+11.52
COMRADE CIRCLE - STA. 10+00.00 TO 13+88.23

SHEET NO. 11 OF 51

PROJECT NO: IP19-006S

H:\PDATA\18-009 MCCALL MESA\DWGS\IMP\STREETS\18-009-ST-011.DWG CHRIS 12/4/2019 1:48 PM



ENDION COURT (NORTH)

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
8. CONSTRUCT 8" TYPE 8A CURB PER CITY OF MENIFEE STD. PLAN NO. 203
10. CONSTRUCT MODIFIED (X=2') RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206.
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°06'55"W	---	201.95'	---	CENTERLINE
2	N00°06'55"W	---	520.35'	---	CENTERLINE
3	04°45'07"	1000.00'	82.94'	41.49'	CENTERLINE
4	N04°38'12"E	---	55.63'	---	CENTERLINE
5	04°45'07"	1000.00'	82.94'	41.49'	CENTERLINE
6	N00°06'55"W	---	80.51'	---	CENTERLINE
7	90°15'33"	35.00'	55.14'	35.16'	CURB RETURN
8	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
9	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
10	N00°06'55"W	---	477.35'	---	6" C&G

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
11	04°46'01"	1014.84'	84.43'	42.24'	6" C&G
12	N04°38'12"E	---	55.63'	---	6" C&G
13	04°45'07"	982.00'	81.44'	40.75'	6" C&G
14	N00°06'55"W	---	33.51'	---	6" C&G
15	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
16	89°44'27"	35.00'	54.82'	34.84'	CURB RETURN
17	N00°06'55"W	---	86.22'	---	6" C&G
18	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
19	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
20	N00°06'55"W	---	271.88'	---	6" C&G

NOTE: DRIVEWAY OPENING SHALL NOT BE CLOSER THAN 2' DISTANCE FROM PROPERTY LINE.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
21	N00°06'55"W	---	119.47'	---	6" C&G
22	04°45'07"	982.00'	81.44'	40.75'	6" C&G
23	N04°38'12"E	---	55.63'	---	6" C&G
24	04°45'07"	1018.00'	84.43'	42.24'	6" C&G
25	N00°06'55"W	25.00'	39.27'	25.00'	CURB RETURN
26	90°00'00"	---	33.51'	---	6" C&G
27	N00°06'55"W	---	85.67'	---	6" C&G

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

⚠ SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201 www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

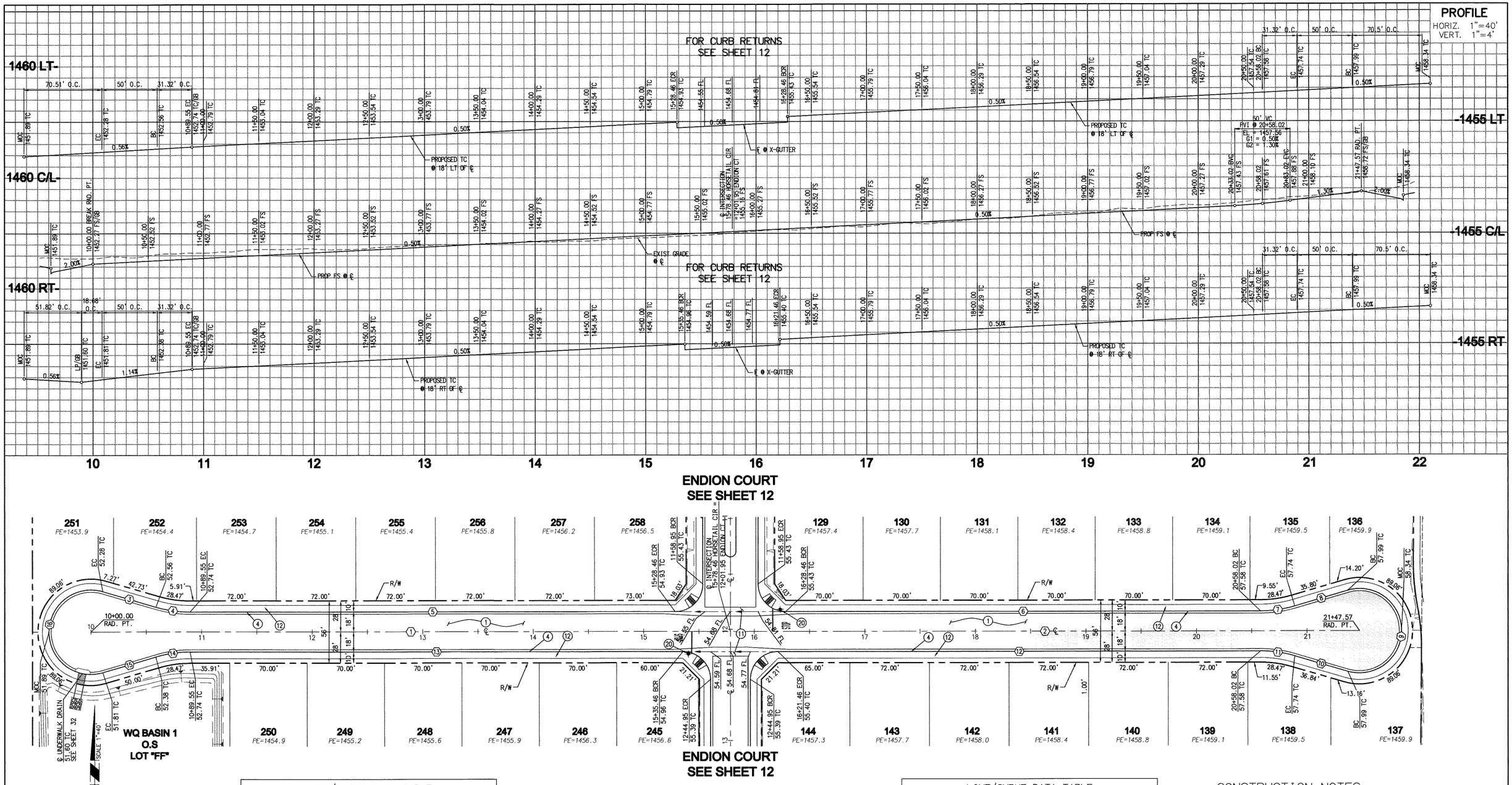
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
ENDION COURT (NORTH)
STA. 10+00.00 TO 20+24.32

SHEET NO. 12 OF 51

PROJECT NO: IP19-006S

H:\PDATA\18-009 MCCALL MESA\DWGS\IMP\STREETS\18-009-ST-012.DWG CHRIS 12/4/2019 1:49 PM



40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°53'05"E	---	578.46'	---	CENTERLINE
2	N89°53'05"E	---	569.11'	---	CENTERLINE
3	N73°48'14"W	---	50.00'	---	6" C&G
4	16°18'41"	110.00'	31.32'	15.76'	6" C&G
5	N89°53'05"E	---	438.91'	---	6" C&G
6	N89°53'05"E	---	429.55'	---	6" C&G
7	16°18'41"	110.00'	31.32'	15.76'	6" C&G
8	N73°34'24"E	---	50.00'	---	6" C&G

HORSETAIL CIRCLE

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
9	212°37'22"	38.00'	141.02'	---	6" C&G
10	N73°48'14"W	---	50.00'	---	6" C&G
11	16°18'41"	110.00'	31.32'	15.76'	6" C&G
12	N89°53'05"E	---	436.55'	---	6" C&G
13	N89°53'05"E	---	445.91'	---	6" C&G
14	16°18'41"	110.00'	31.32'	15.76'	6" C&G
15	N73°34'24"E	---	50.00'	---	6" C&G
16	212°37'22"	38.00'	141.02'	---	6" C&G

CONSTRUCTION NOTES

(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(11) CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12-5-19 DATE
RECOMMENDED BY:
12/5/19 DATE

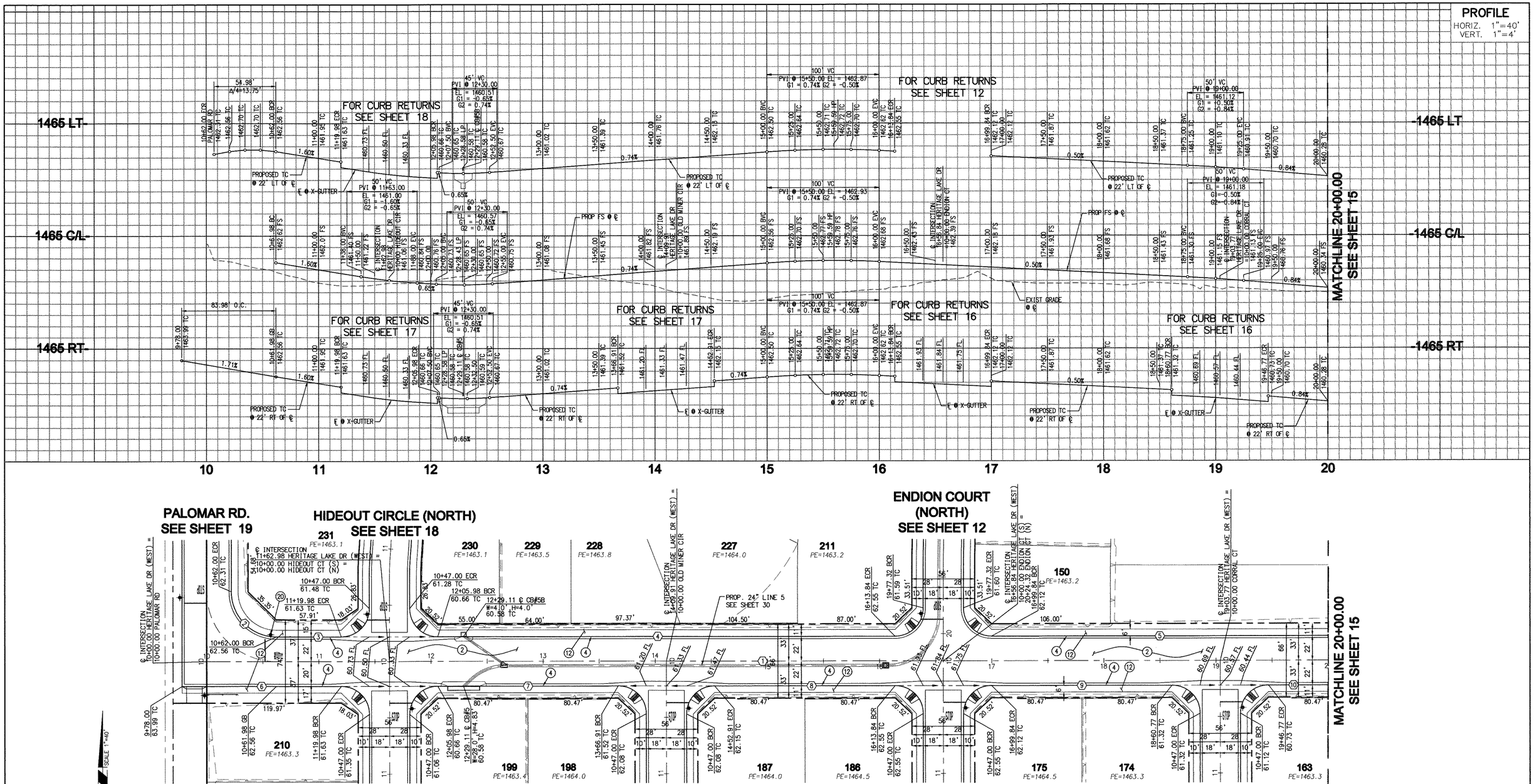
CITY OF MENIFEE ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
HORSETAIL CIRCLE
STA. 10+00.00 TO 21+45.57

SHEET NO. 13 OF 51

PROJECT NO: IP19-006S

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NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°53'05"E	---	1000.00'	---	CENTERLINE
2	89°59'45"	40.00'	62.83'	40.00'	6" C&G
3	N89°53'05"E	---	57.98'	---	6" C&G
4	N89°53'05"E	---	407.86'	---	6" C&G
5	N89°53'05"E	---	300.16'	---	6" C&G

HERITAGE LAKE DRIVE (WEST)

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
6	N89°53'05"E	---	141.98'	---	6" C&G
7	N89°53'05"E	---	160.93'	---	6" C&G
8	N89°53'05"E	---	160.93'	---	6" C&G
9	N89°53'05"E	---	160.93'	---	6" C&G
10	N89°53'05"E	---	53.23'	---	6" C&G

CONSTRUCTION NOTES

(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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Avoid cutting underground utility lines. It's easy.
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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

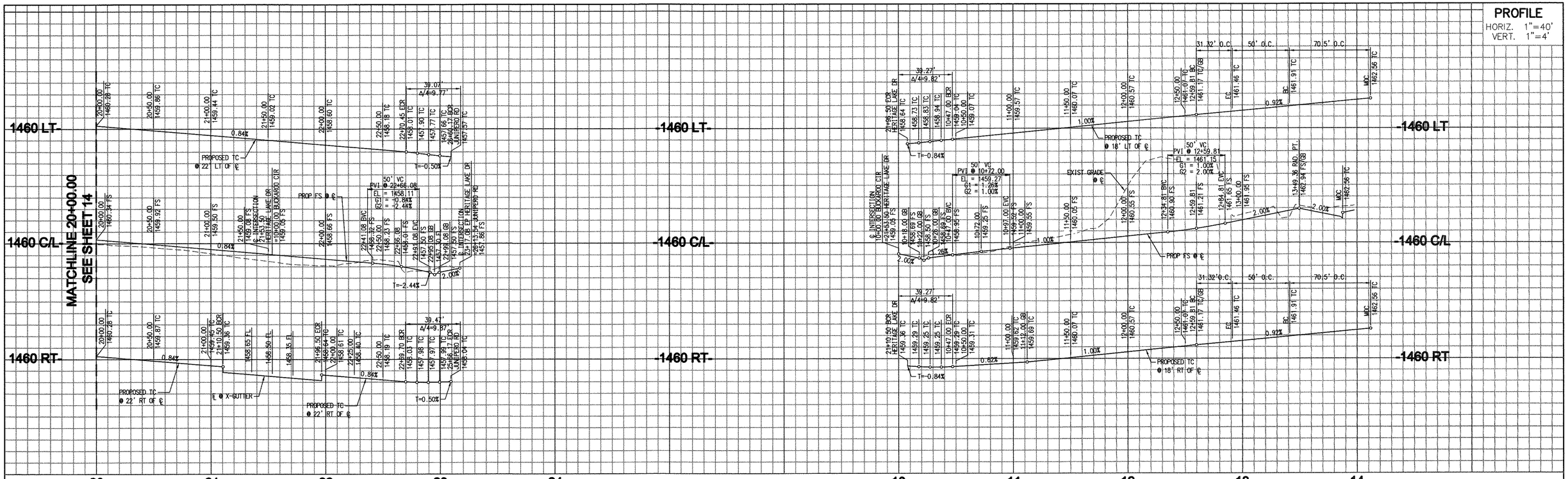
CITY OF MENIFEE
ENGINEERING DEPARTMENT

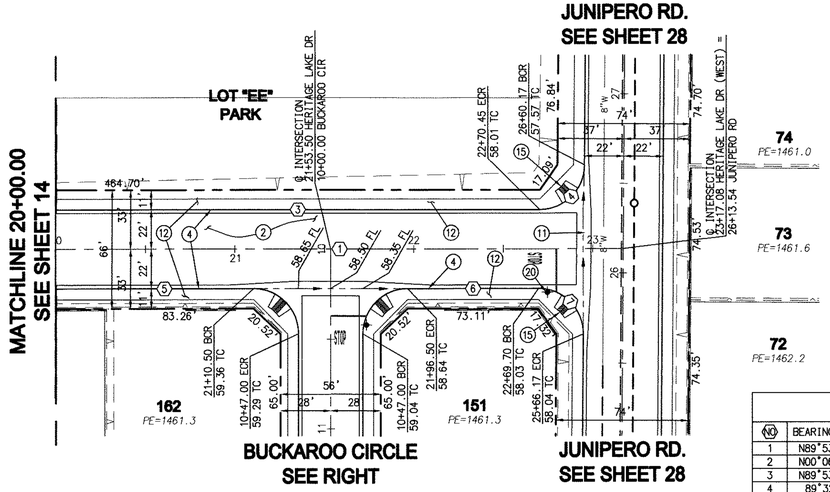
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
HERITAGE LAKE DRIVE (WEST)
STA. 10+00.00 TO 20+00.00

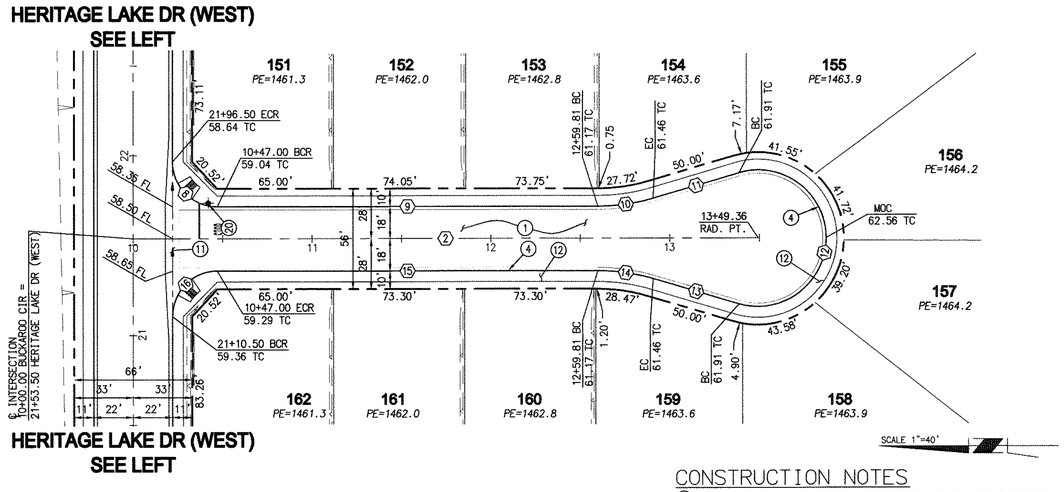
SHEET NO. 14 OF 51

PROJECT NO: IP19-006S

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LINE/CURVE DATA TABLE					
(N)	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°53'05"E	--	317.08'	--	CENTERLINE
2	N00°06'55"W	--	349.36'	--	CENTERLINE
3	N89°53'05"E	--	270.45'	--	6" C&G
4	89°32'41"	25.00'	39.07'	24.80'	CURB RETURN
5	N89°53'05"E	--	110.50'	--	6" C&G
6	N89°53'05"E	--	73.20'	--	6" C&G
7	90°27'19"	25.00'	39.47'	25.20'	CURB RETURN
8	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
9	N00°06'55"W	--	212.81'	--	6" C&G
10	16°18'41"	110.00'	31.32'	15.76'	6" C&G
11	N16°25'36"W	--	50.00'	--	6" C&G
12	212°37'22"	38.00'	141.02'	--	6" C&G
13	N16°11'51"E	--	50.00'	--	6" C&G
14	16°18'41"	110.00'	31.32'	15.76'	6" C&G
15	N00°06'55"W	--	212.81'	--	6" C&G
16	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

CONSTRUCTION NOTES

(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(11) CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

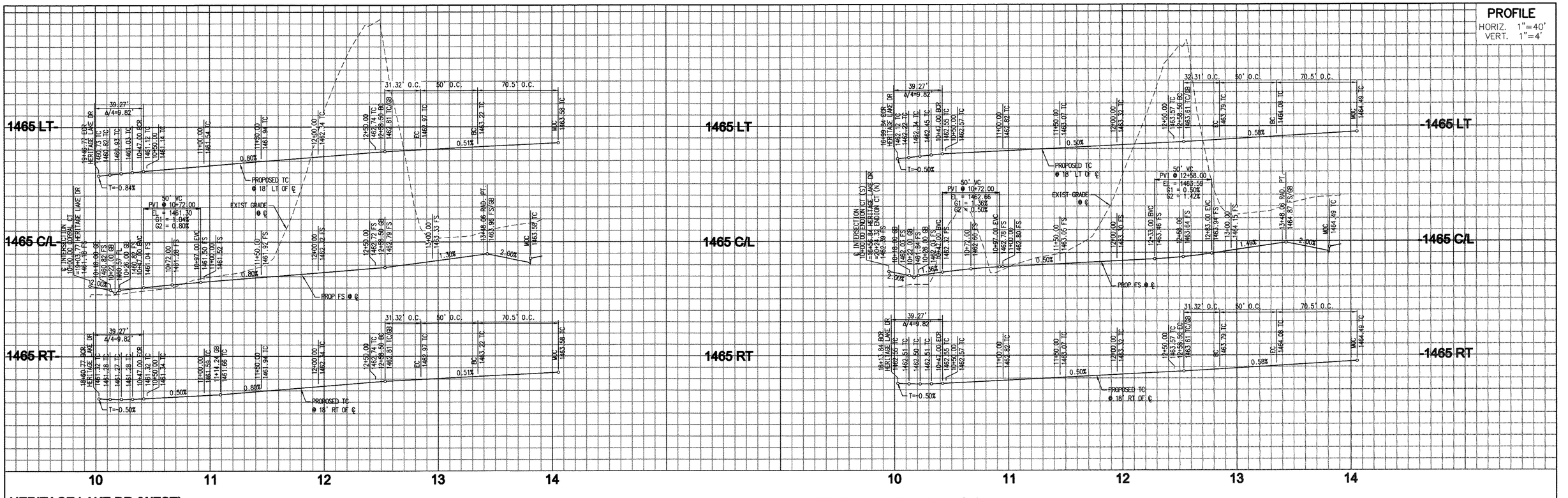
CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH, DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — RCE 61253 EXP. 6/30/21 — 12.5.19 DATE
RECOMMENDED BY: — 12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
HERITAGE LAKE DRIVE-STA. 20+00.00 TO 23+17.08
BUCKAROO CIRCLE - STA. 10+00.00 TO 13+49.36

SHEET NO. 15 OF 51
PROJECT NO: IP19-006S

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SCALE 1"=40'

CORRAL COURT

SCALE 1"=40'

ENDION COURT (SOUTH)

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°06'55"W	---	348.06'	---	CENTERLINE
2	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
3	N00°06'55"W	---	211.50'	---	6" C&G
4	16°18'41"	110.00'	31.32'	15.76'	6" C&G
5	N16°25'36"W	---	50.00'	---	6" C&G
6	212°37'22"	38.00'	141.02'	---	6" C&G
7	N16°11'46"E	---	50.00'	---	6" C&G
8	16°18'41"	110.00'	31.32'	15.76'	6" C&G
9	N00°06'55"W	---	211.50'	---	6" C&G
10	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
11	N00°06'55"W	---	348.06'	---	CENTERLINE
12	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
13	N00°06'55"W	---	211.50'	---	6" C&G
14	16°18'41"	110.00'	31.32'	15.76'	6" C&G
15	N16°25'36"W	---	50.00'	---	6" C&G
16	212°37'22"	38.00'	141.02'	---	6" C&G
17	N16°11'46"E	---	50.00'	---	6" C&G
18	16°18'41"	110.00'	31.32'	15.76'	6" C&G
19	N00°06'55"W	---	211.50'	---	6" C&G
20	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE

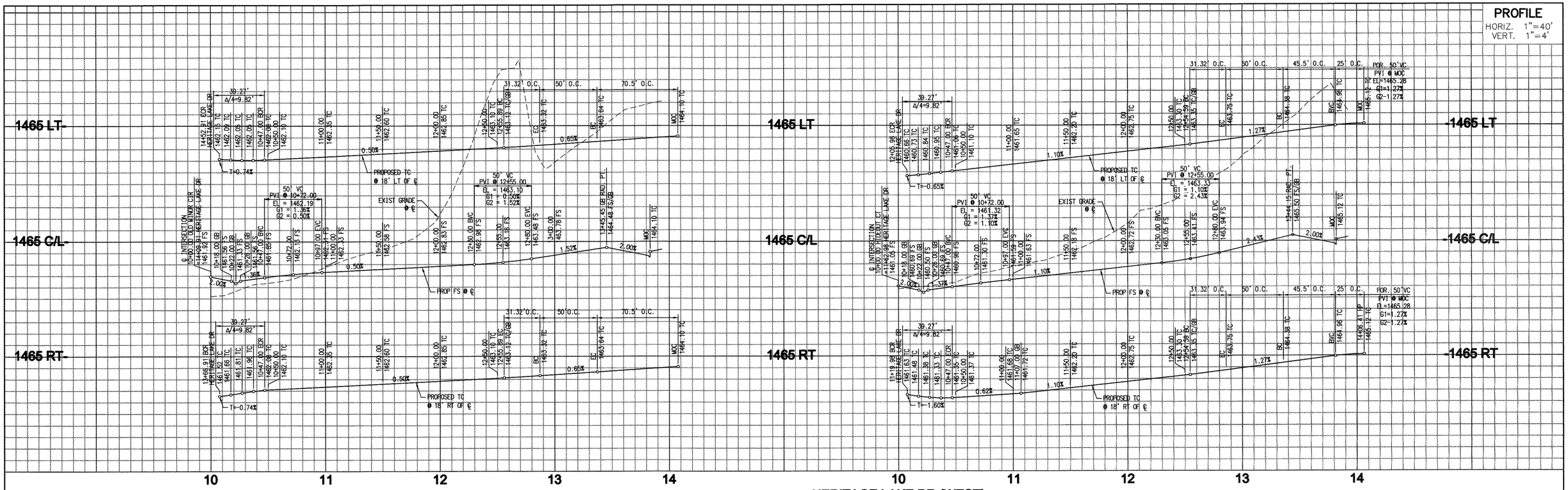
CITY OF MENIFEE
ENGINEERING DEPARTMENT

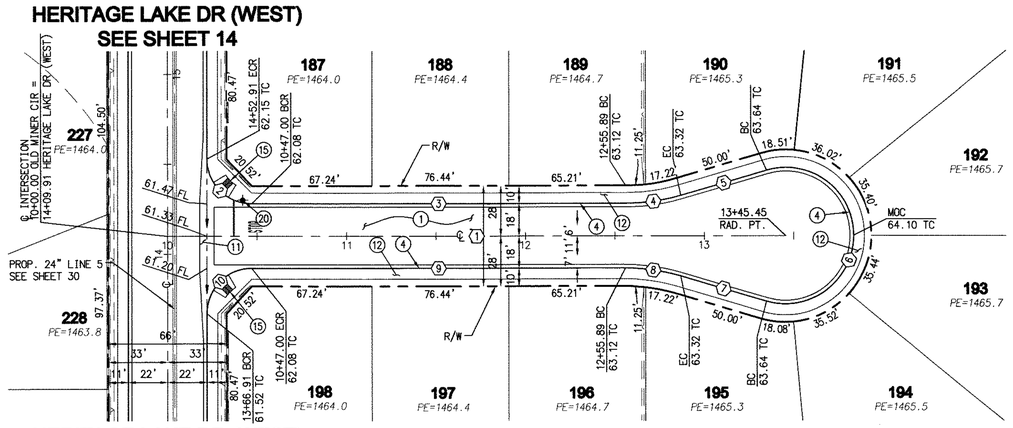
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
CORRAL COURT STA. 10+00.00 TO 13+48.06
ENDION COURT STA. 10+00.00 TO 13+48.06

SHEET NO. 16 OF 51

PROJECT NO: IP19-006S

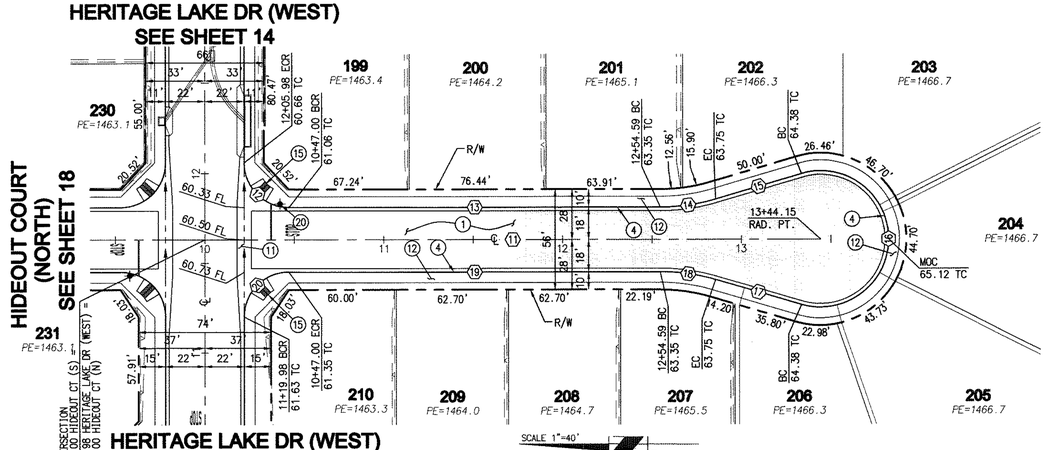
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OLD MINER CIRCLE

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°06'55"W	---	345.45'	---	CENTERLINE
2	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
3	N00°06'55"W	---	208.89'	---	6" C&G
4	16°18'41"	110.00'	31.32'	15.76'	6" C&G
5	N16°25'36"W	---	50.00'	---	6" C&G
6	212°37'22"	38.00'	141.02'	---	6" C&G
7	N16°11'46"E	---	50.00'	---	6" C&G
8	16°18'41"	110.00'	31.32'	15.76'	6" C&G
9	N00°06'55"W	---	208.89'	---	6" C&G
10	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN



HIDEOUT COURT (SOUTH)

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
11	N00°06'55"W	---	344.14'	---	CENTERLINE
12	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
13	N00°06'55"W	---	207.59'	---	6" C&G
14	16°18'41"	110.00'	31.32'	15.76'	6" C&G
15	N16°25'36"W	---	50.00'	---	6" C&G
16	212°37'22"	38.00'	141.02'	---	6" C&G
17	N16°11'46"E	---	50.00'	---	6" C&G
18	16°18'41"	110.00'	31.32'	15.76'	6" C&G
19	N00°06'55"W	---	207.59'	---	6" C&G
20	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
11. CONSTRUCT CROSS GUTTER AND SPANDREL PER CITY OF MENIFEE STD. PLAN NO. 209
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

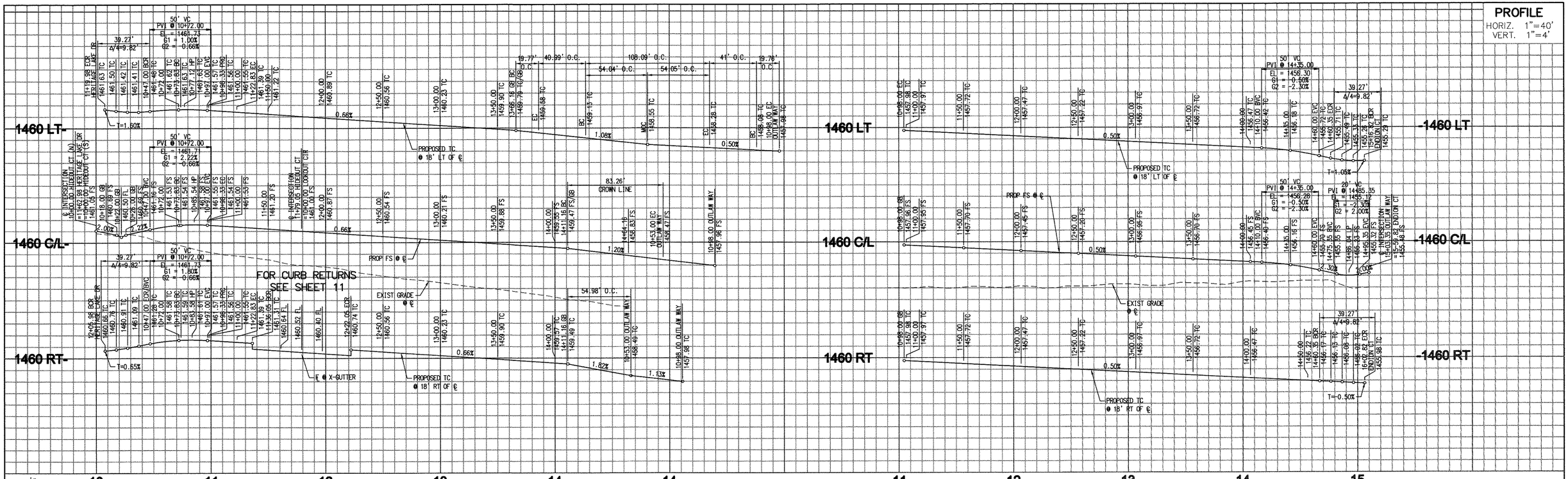
CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

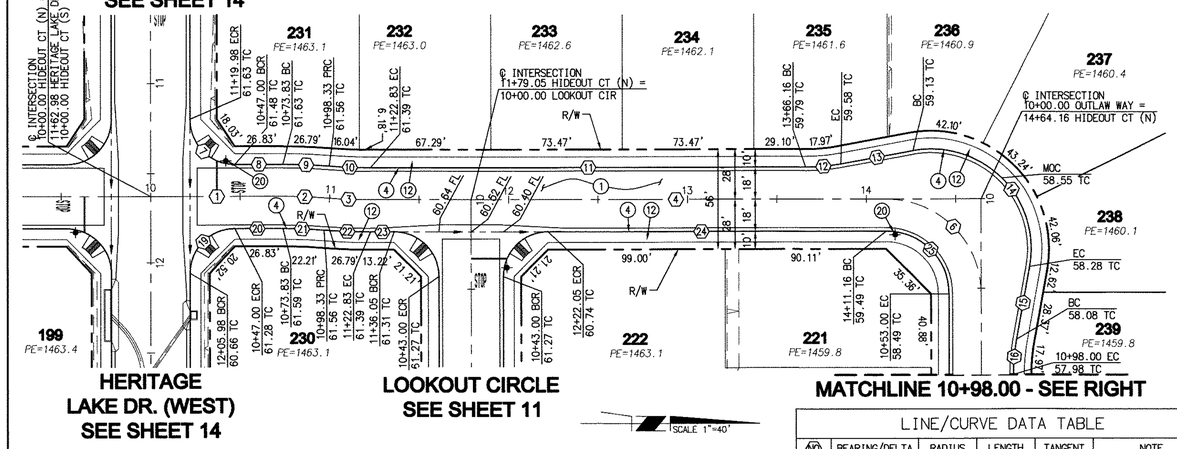
CITY OF MENIFEE
ENGINEERING DEPARTMENT

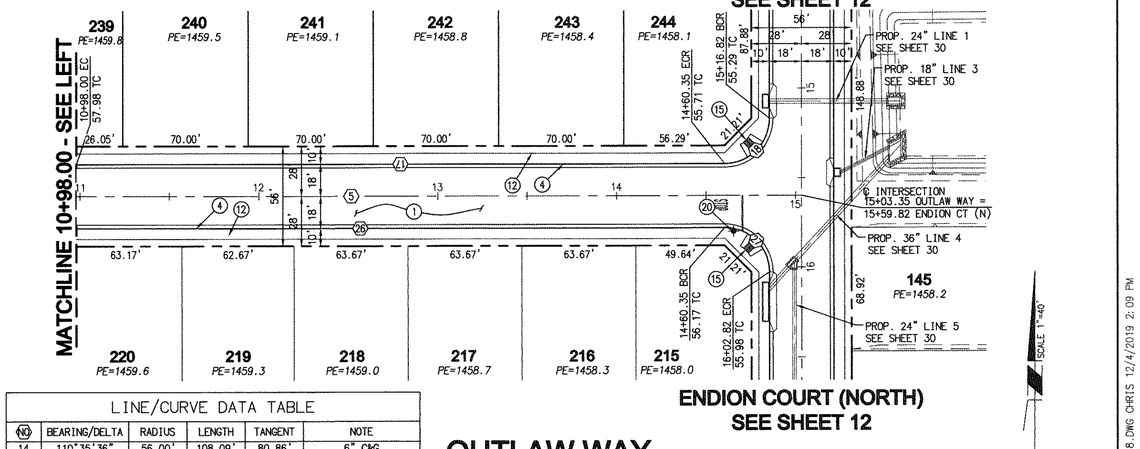
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
OLD MINOR CIRCLE STA. 10+00.00 TO 13+45.45
HIDEOUT CIRCLE STA. 10+00.00 TO 13+44.15

SHEET NO. 17 OF 51
PROJECT NO: IP19-006S

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HIDEOUT COURT (NORTH)

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°06'55"W	---	73.83'	---	CENTERLINE
2	04°40'46"	300.00'	24.50'	12.26'	CENTERLINE
3	04°40'46"	300.00'	24.50'	12.26'	CENTERLINE
4	N00°06'55"W	---	341.33'	---	CENTERLINE
5	N89°53'05"E	---	503.35'	---	CENTERLINE
6	90°00'00"	53.00'	83.25'	53.00'	CROWN
7	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
8	N00°06'55"W	---	26.83'	---	6" C&G
9	04°40'46"	318.00'	25.97'	12.99'	6" C&G
10	04°40'46"	282.00'	23.03'	11.52'	6" C&G
11	N00°06'55"W	---	243.33'	---	6" C&G
12	10°17'48"	110.00'	19.77'	9.91'	6" C&G
13	N10°24'43"W	---	40.99'	---	6" C&G

OUTLAW WAY

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
14	110°35'36"	56.00'	108.09'	80.86'	6" C&G
15	N79°49'07"W	---	40.99'	---	6" C&G
16	10°17'48"	110.00'	19.77'	9.91'	6" C&G
17	N89°53'05"E	---	362.35'	---	6" C&G
18	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
19	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN
20	N00°06'12"W	---	26.83'	---	6" C&G
21	04°40'46"	282.00'	24.75'	11.52'	6" C&G
22	04°40'46"	318.00'	25.97'	12.99'	6" C&G
23	N00°06'55"W	---	13.22'	---	6" C&G
24	N00°06'55"W	---	189.11'	---	6" C&G
25	90°00'00"	35.00'	54.98'	35.00'	6" C&G
26	N89°53'05"E	---	407.35'	---	6" C&G
27	90°00'00"	25.00'	39.27'	25.00'	CURB RETURN

CONSTRUCTION NOTES

1. CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
4. CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
12. CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
15. CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
20. INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
OUTLAW WAY STA. 10+00.00 TO 15+03.35
HIDEOUT COURT STA. 10+00.00 TO 14+64.16

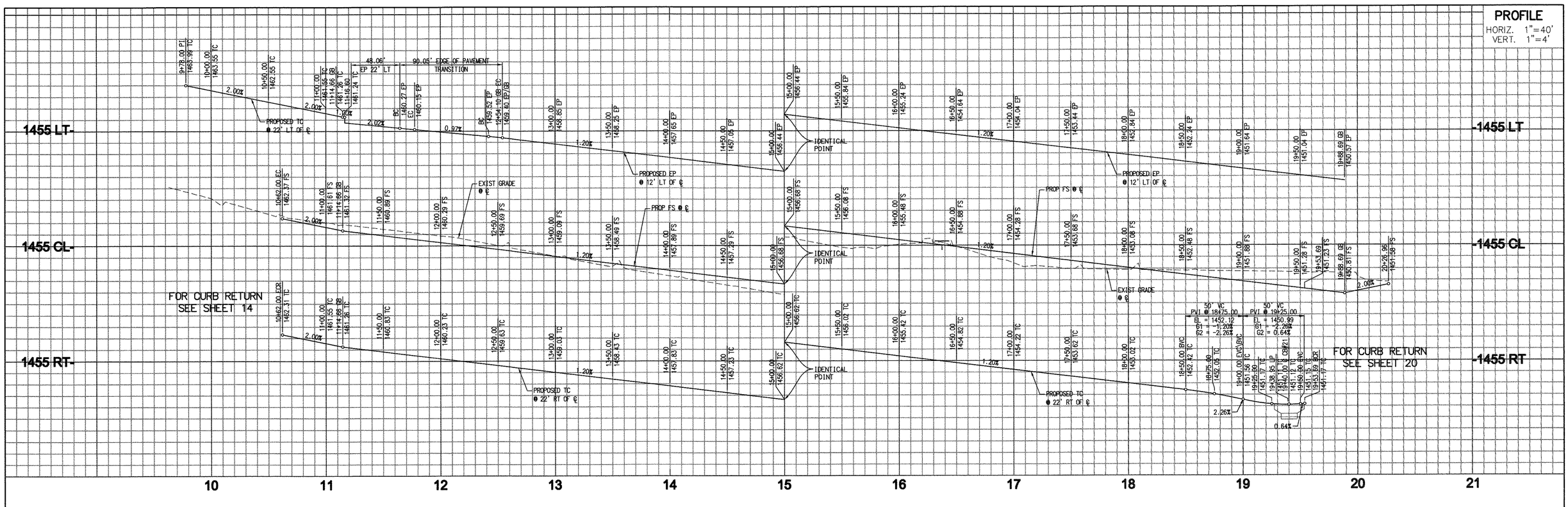
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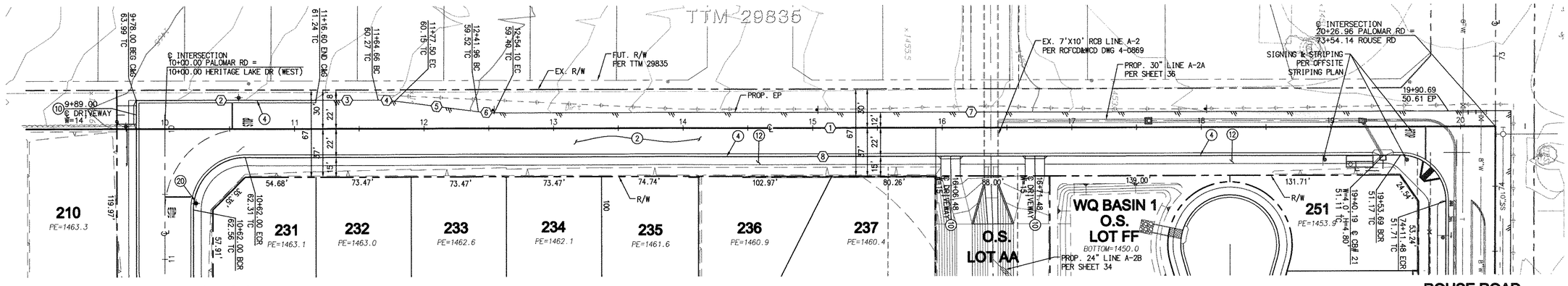
PROJECT NO: IP19-006S

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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'





SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°07'10"W	---	1026.96'	---	CENTERLINE
2	N00°07'10"W	---	138.60'	---	6" C&G
3	N00°07'10"W	---	48.06'	---	EDGE OF PAVEMENT
4	07°22'34"	100.00'	12.87'	6.45'	EDGE OF PAVEMENT
5	N07°15'24"E	---	65.00'	---	EDGE OF PAVEMENT
6	06°58'39"	100.00'	12.18'	6.10'	EDGE OF PAVEMENT
7	N00°07'10"W	---	736.59'	---	EDGE OF PAVEMENT
8	N00°07'10"W	---	891.70'	---	6" C&G

PALOMAR ROAD

NOTE: DRIVEWAY OPENING SHALL NOT BE CLOSER THAN 2' DISTANCE FROM PROPERTY LINE.

CONSTRUCTION NOTES

(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(10) CONSTRUCT MODIFIED (X=2') RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206.
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

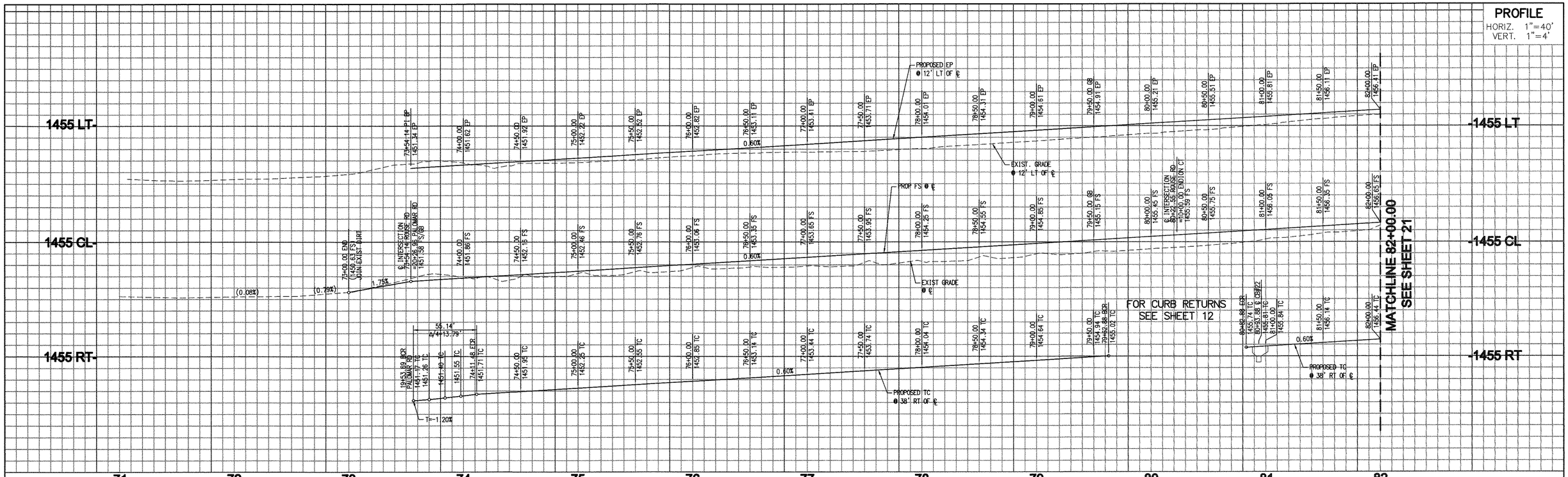
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
PALOMAR ROAD
STA. 10+00.00 TO 20+26.96

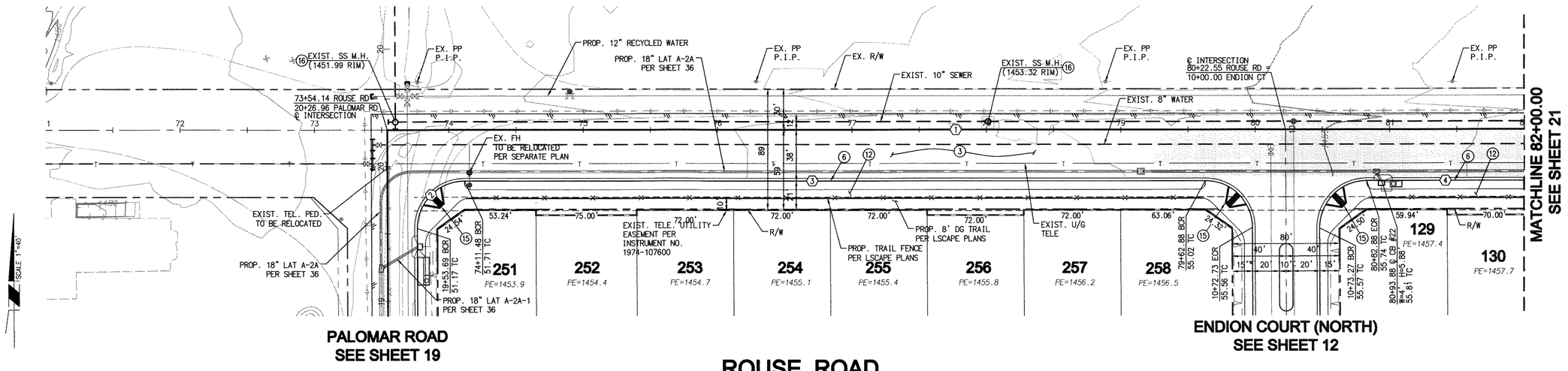
SHEET NO. 19 OF 51

PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'





PALOMAR ROAD
SEE SHEET 19

ENDION COURT (NORTH)
SEE SHEET 12

ROUSE ROAD

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°51'22"W	--	845.86'	--	CENTERLINE
2	90°15'48"	35.00'	55.14'	35.16'	CURB RETURN
3	N89°51'22"W	--	551.40'	--	8" C&G
4	N89°51'22"W	--	117.12'	--	8" C&G

CONSTRUCTION NOTES
(3) CONSTRUCT 6" A.C. PAVEMENT OVER 8" A.B., OR PER SOILS REPORT
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(16) ADJUST MANHOLE TO GRADE PER CITY OF MENIFEE STD. PLAN NO. 814

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Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

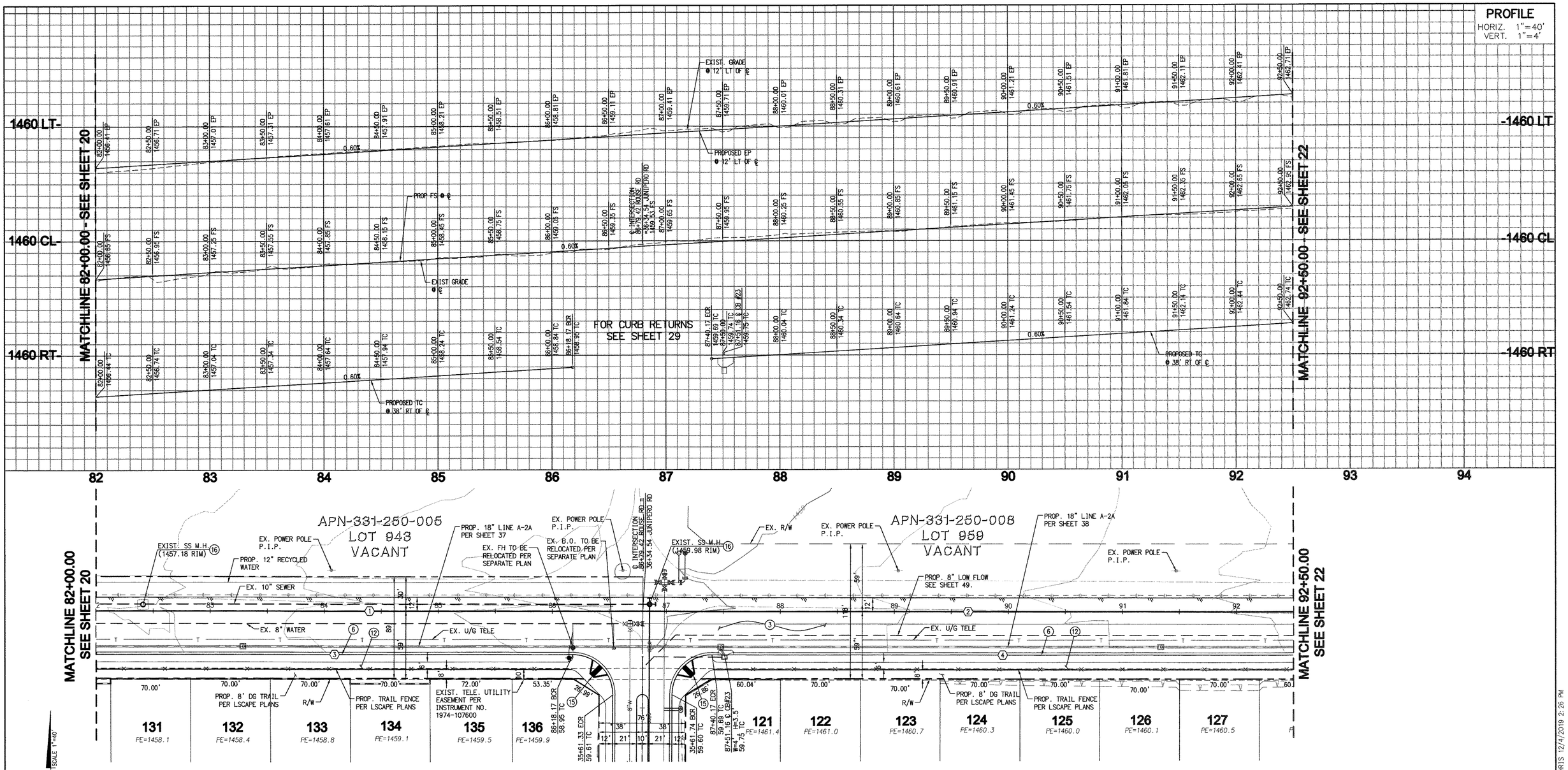
CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
ROUSE ROAD
STA. 71+00.00 TO 82+00.00

SHEET NO. 20 OF 51
PROJECT NO: IP19-006S

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ROUSE ROAD

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°51'22"W	---	479.42'	---	CENTERLINE
2	N89°51'18"W	---	570.59'	---	CENTERLINE
3	N89°51'22"W	---	418.17'	---	8" C&G
4	N89°51'18"W	---	509.83'	---	8" C&G

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

CONSTRUCTION NOTES

(3) CONSTRUCT 6" A.C. PAVEMENT OVER 8" A.B., OR PER SOILS REPORT
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(16) ADJUST MANHOLE TO GRADE PER CITY OF MENIFEE STD. PLAN NO. 814

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

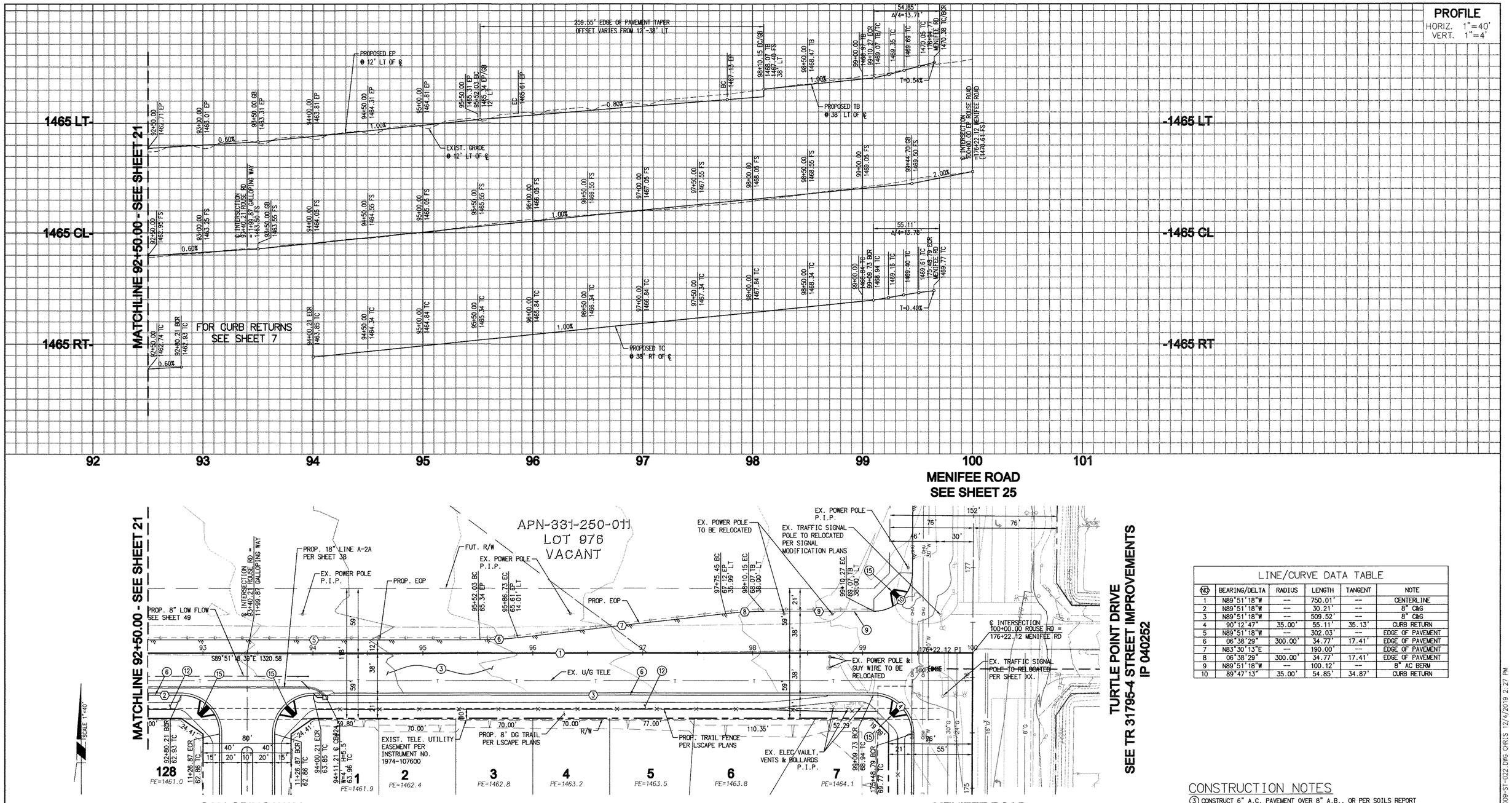
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
ROUSE ROAD
STA. 82+00.00 TO 92+50.00

SHEET NO. 21 OF 51

PROJECT NO: IP19-006S

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TURTLE POINT DRIVE
SEE TR 31795-4 STREET IMPROVEMENTS
IP 040252

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°51'18"W	---	750.01'	---	CENTERLINE
2	N89°51'18"W	---	30.21'	---	8" C&G
3	N89°51'18"W	---	509.52'	---	8" C&G
4	90°12'47"	35.00'	55.11'	35.13'	CURB RETURN
5	N89°51'18"W	---	302.03'	---	EDGE OF PAVEMENT
6	06°38'29"	300.00'	34.77'	17.41'	EDGE OF PAVEMENT
7	N83°30'13"E	---	190.00'	---	EDGE OF PAVEMENT
8	06°38'29"	300.00'	34.77'	17.41'	EDGE OF PAVEMENT
9	N89°51'18"W	---	100.12'	---	8" AC BERM
10	89°47'13"	35.00'	54.85'	34.87'	CURB RETURN

CONSTRUCTION NOTES

(3) CONSTRUCT 6" A.C. PAVEMENT OVER 8" A.B., OR PER SOILS REPORT
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(9) CONSTRUCT 8" AC DIKE PER CITY OF MENIFEE STD. PLAN NO, 204
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

⚠ SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

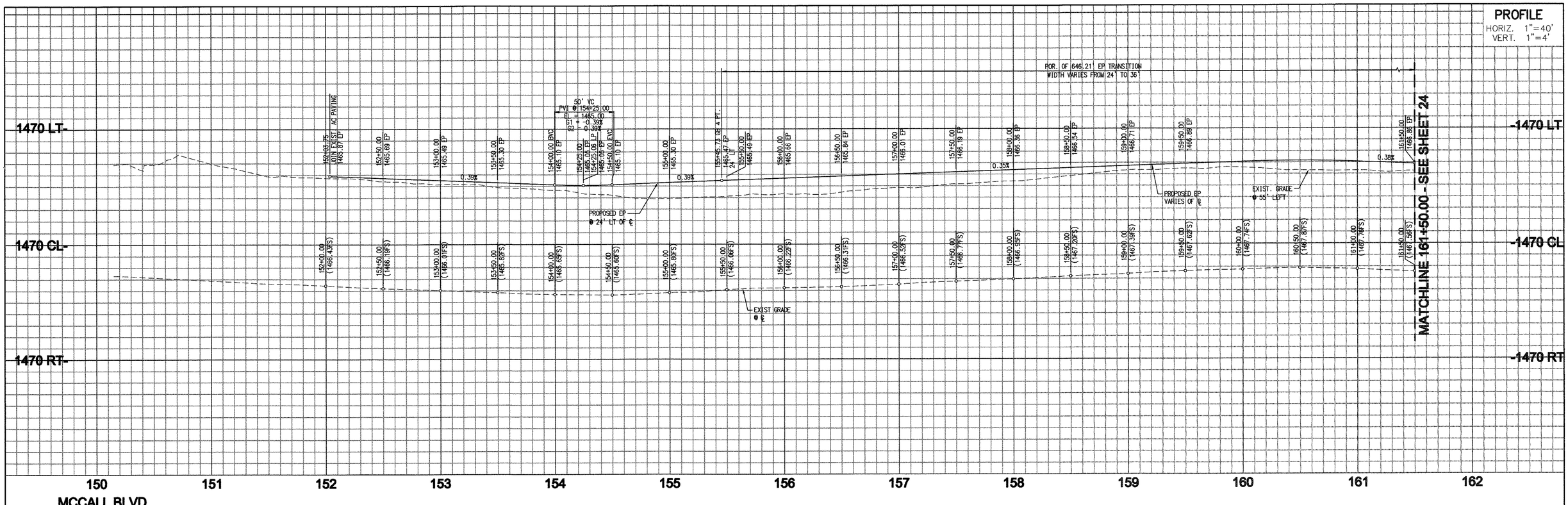
CITY OF MENIFEE
ENGINEERING DEPARTMENT

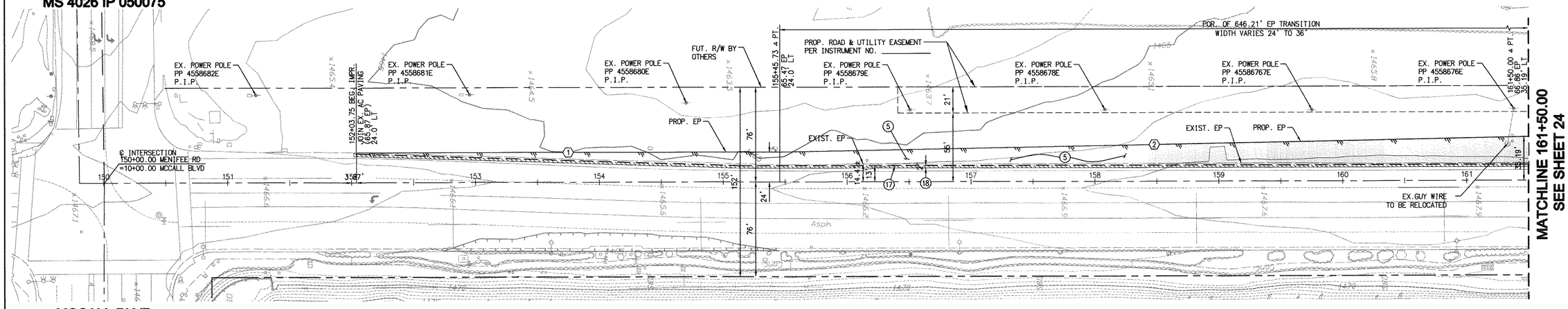
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
ROUSE ROAD
STA. 92+50.00 TO 100+00.00

SHEET NO. 22 OF 51

PROJECT NO: IP19-006S

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LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 00°21'26" E	---	341.99'	---	EDGE OF PAVEMENT
2	N 00°42'06" W	---	604.37'	---	EDGE OF PAVEMENT

CONSTRUCTION NOTES

(5) CONSTRUCT 6" A.C. PAVEMENT OVER 10" A.B., OR PER SOILS REPORT
(17) AC SAWCUT JOINT PER DETAIL SHOWN ON SHEET 2
(18) GRIND AND OVERLAY EXISTING PAVEMENT (1.5" GRIND AND 1" OVERLAY) OR AS DIRECTED BY CITY ENGINEER/INSPECTOR

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

MENIFEE ROAD

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 OR 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/6/19 DATE

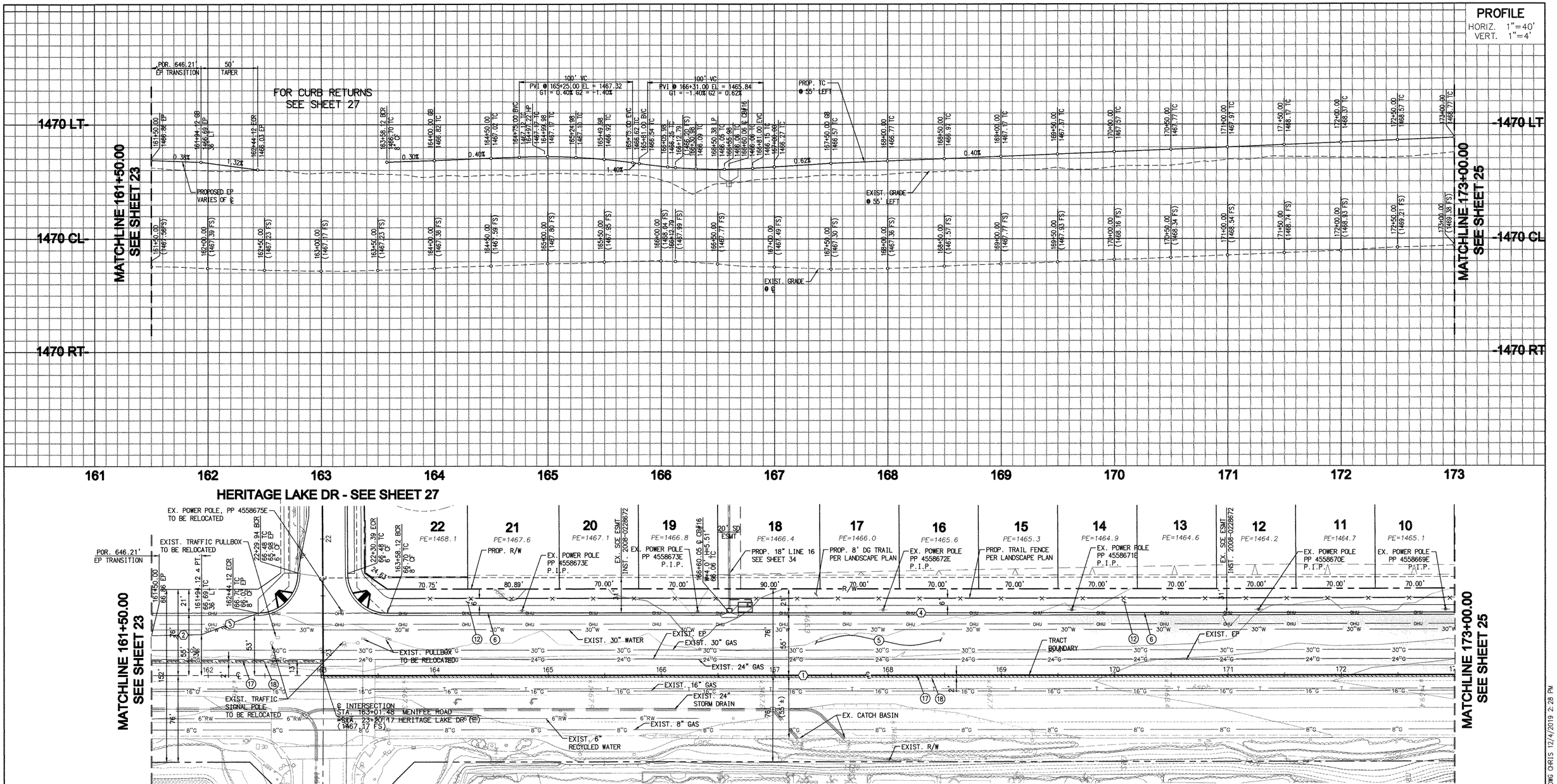
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
MENIFEE ROAD
STA. 152+03.75 TO STA. 161+50.00

SHEET NO. 23 OF 51

PROJECT NO: IP19-006S

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HERITAGE LAKE DR
SEE TR 30705-1 STREET IMPROVEMENTS
IP 030130

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°21'29"E	---	1149.98'	---	CENTERLINE
2	N 00°42'06" W	---	44.13'	---	EDGE OF PAVEMENT
3	N 20°26'53" W	---	53.49'	---	EDGE OF PAVEMENT
4	N00°21'29"E	---	941.87'	---	8" C&G

MENIFEE ROAD

CONSTRUCTION NOTES

(5) CONSTRUCT 6" A.C. PAVEMENT OVER 10" A.B., OR PER SOILS REPORT
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(17) AC SAWCUT JOINT PER DETAIL SHOWN ON SHEET 2
(18) GRIND AND OVERLAY EXISTING PAVEMENT (1.5" GRIND AND 1" OVERLAY) OR AS DIRECTED BY CITY ENGINEER/INSPECTOR

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

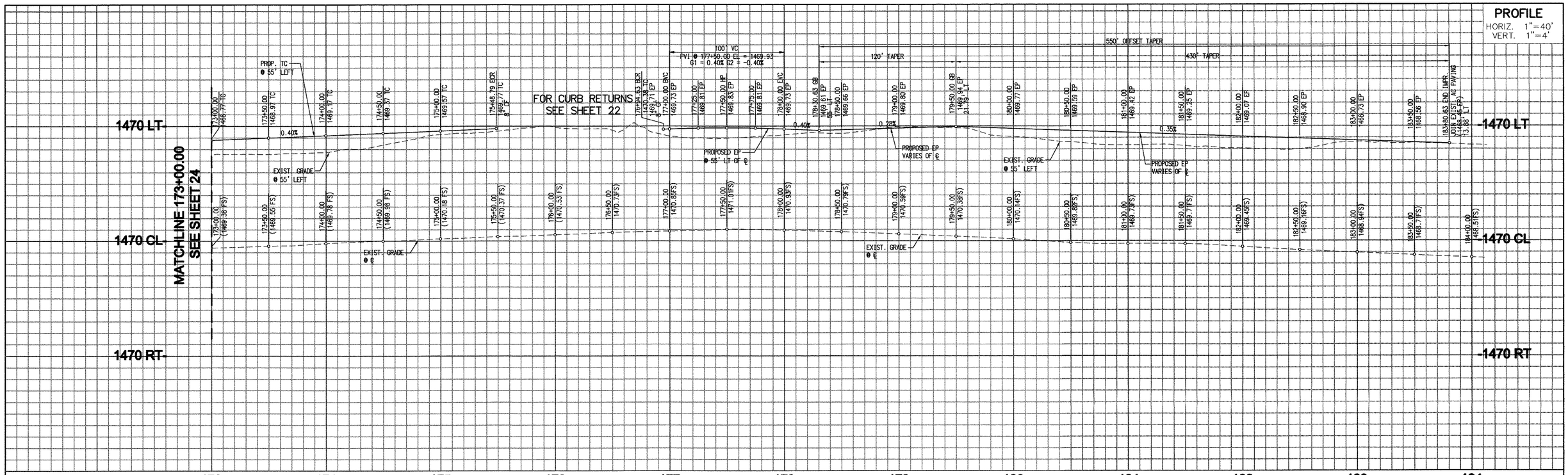
CITY OF MENIFEE
ENGINEERING DEPARTMENT

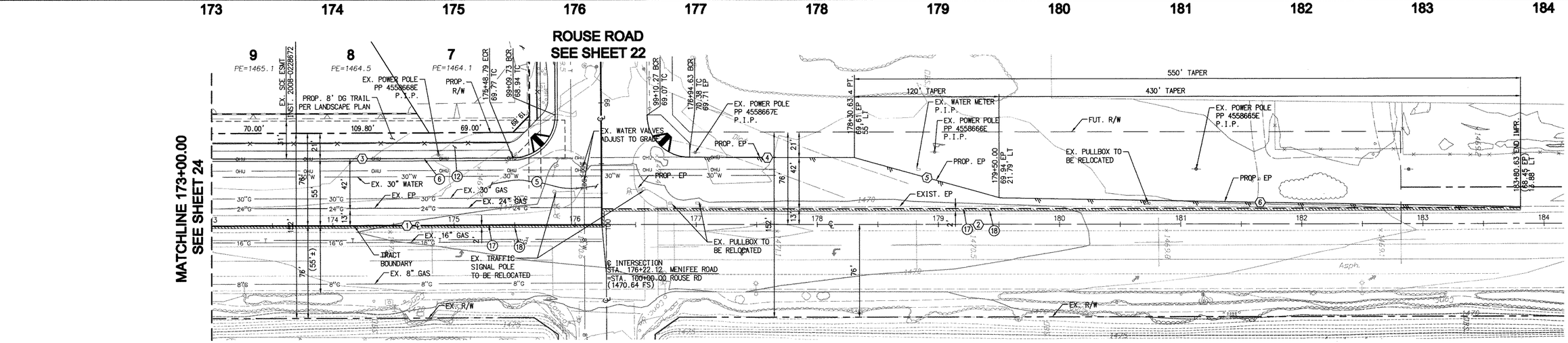
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
MENIFEE ROAD
STA. 161+50.00 TO STA. 173+00.00

SHEET NO. 24 OF 51

PROJECT NO: IP19-006S

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TURTLE POINT DRIVE
SEE TR 31795-4 STREET IMPROVEMENTS
IP 040252

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°21'29"E	---	322.11'	---	CENTERLINE
2	N00°31'17"E	---	602.87'	---	CENTERLINE
3	N00°21'29"E	---	248.80'	---	8" C&G
4	N 00°35'51" E	---	135.99'	---	EDGE OF PAVEMENT
5	N 15°59'22" E	---	124.51'	---	EDGE OF PAVEMENT
6	N 01°34'31" E	---	430.07'	---	EDGE OF PAVEMENT

MENIFEE ROAD

CONSTRUCTION NOTES

(5) CONSTRUCT 6" A.C. PAVEMENT OVER 10" A.B., OR PER SOILS REPORT
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(17) AC SAWCUT JOINT PER DETAIL SHOWN ON SHEET 2
(18) GRIND AND OVERLAY EXISTING PAVEMENT (1.5" GRIND AND 1" OVERLAY) OR AS DIRECTED BY CITY ENGINEER/INSPECTOR

Call before you Dig
Avoid cutting underground utility lines. It's easy.
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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
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DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/6/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
MENIFEE ROAD
STA. 177+50.00 TO STA. 182+25.04

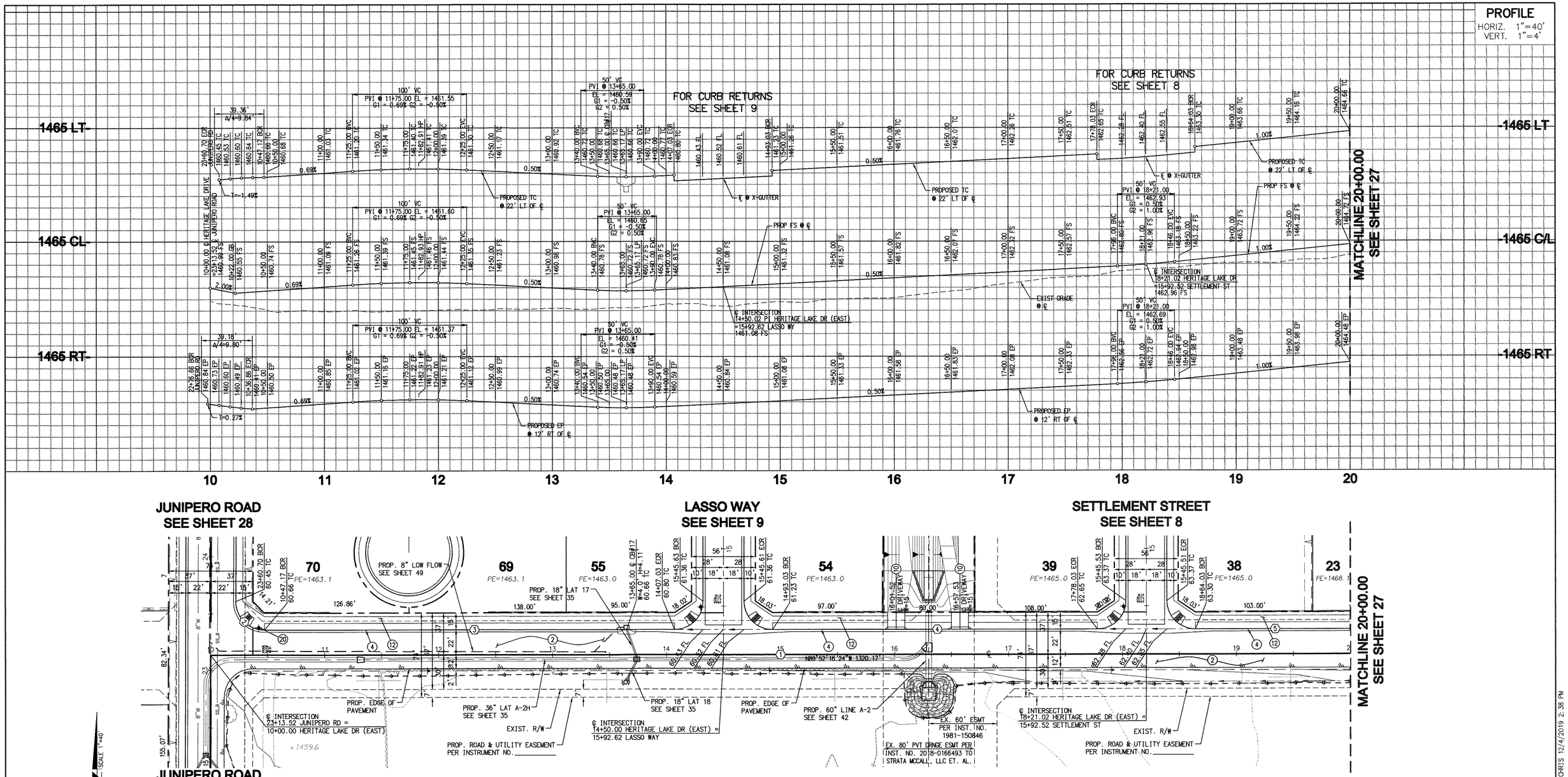
SHEET NO. 25 OF 51

PROJECT NO: IP19-006S

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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'



HERITAGE LAKE DRIVE (EAST)

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°52'16"W	---	1000.00'	---	CENTERLINE
2	90°12'40"	25.00'	39.36'	25.09'	CURB RETURN
3	N89°52'16"W	---	359.86'	---	6" C&G
4	N89°52'16"W	---	285.00'	---	6" C&G
5	N89°52'16"W	---	135.97'	---	6" C&G

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

NOTE: DRIVEWAY OPENING SHALL NOT BE CLOSER THAN 2' DISTANCE FROM PROPERTY LINE.

CONSTRUCTION NOTES

(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(10) CONSTRUCT MODIFIED (X=2') RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206.
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(20) INSTALL STREET NAME SIGN PER CITY OF MENIFEE STD. PLAN NO. 815 & 817

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH, DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — RCE 61253 EXP. 6/30/21 — DATE 12.5.19
RECOMMENDED BY: — DATE 12/5/19

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
HERITAGE LAKE DRIVE (EAST)
STA. 10+00.00 TO STA. 20+00.00

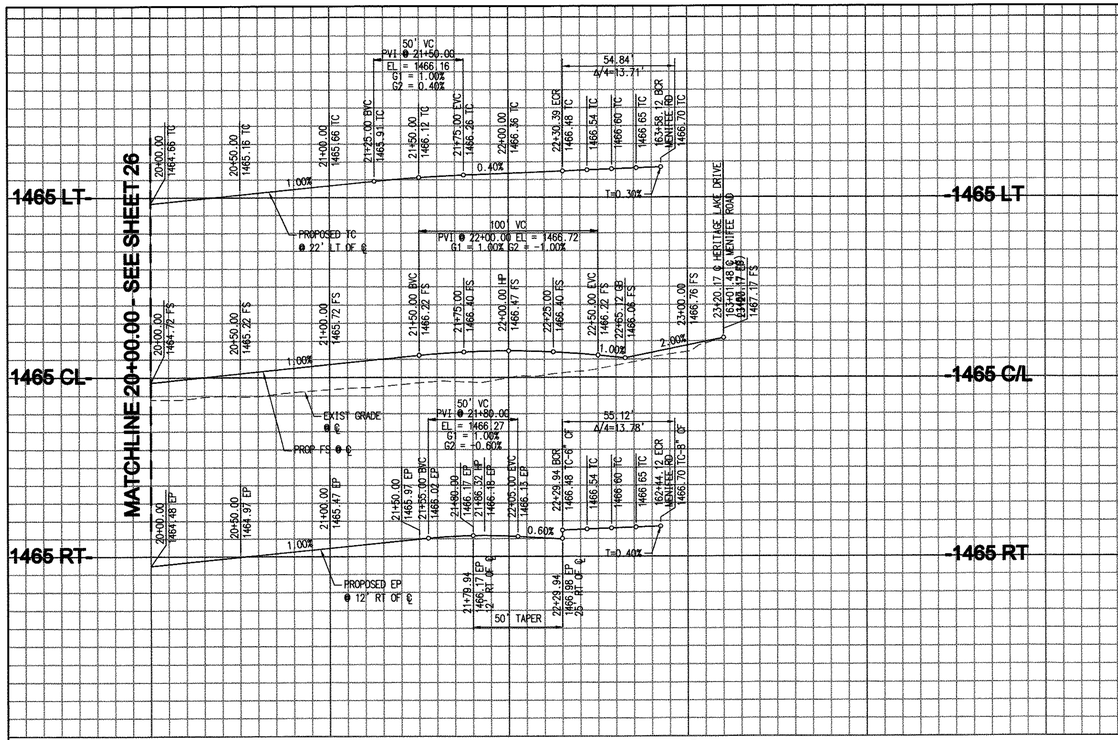
SHEET NO. 26 OF 51

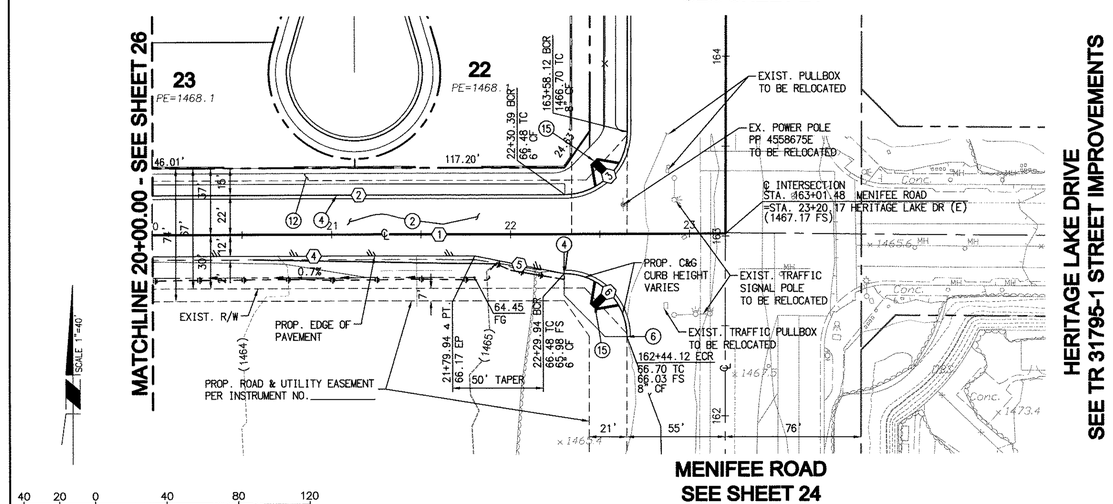
PROJECT NO: IP19-006S

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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'





HERITAGE LAKE DRIVE (EAST)

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N89°52'16"W	---	320.16'	---	CENTERLINE
2	N89°52'16"W	---	230.39'	---	6" C&G
3	89°46'15"	35.00'	54.84'	34.86'	CURB RETURN
4	N89°52'16"W	---	179.93'	---	EDGE OF PAVEMENT
5	N78°33'40"W	---	50.99'	---	EDGE OF PAVEMENT
6	90°13'45"	35.00'	55.12'	35.14'	CURB RETURN

CONSTRUCTION NOTES

(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(6) CONSTRUCT 8" TYPE 8 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 201
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
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DATE:	12/2019

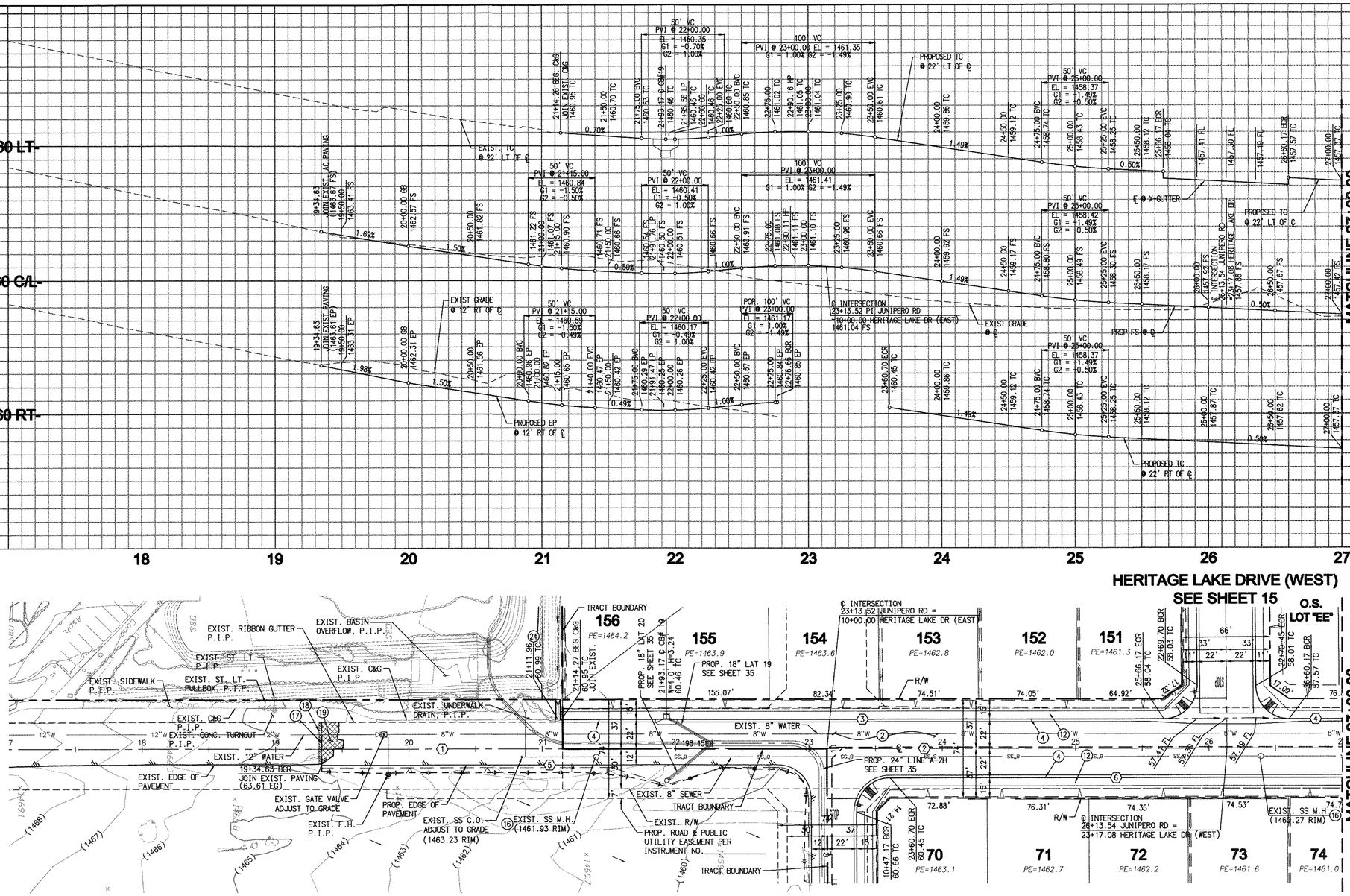
CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
HERITAGE LAKE DRIVE (EAST)
STA. 20+00.00 TO STA. 23+20.17

SHEET NO. 27 OF 51
PROJECT NO: IP19-006S

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SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°20'24"E	---	180.67'	---	CENTERLINE
2	N00°20'24"E	---	584.70'	---	CENTERLINE
3	N00°20'24"E	---	451.89'	---	6" C&G
4	N00°20'24"E	---	39.83'	---	6" C&G
5	N00°20'24"E	---	342.03'	---	EDGE OF PAVEMENT
6	N00°20'24"E	---	339.30'	---	6" C&G

CONSTRUCTION NOTES

(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(16) ADJUST MANHOLE TO GRADE PER CITY OF MENIFEE STD. PLAN NO. 814
(17) AC SAWCUT JOINT PER DETAIL SHOWN ON SHEET 2
(18) GRIND AND OVERLAY EXISTING PAVEMENT (1.5" GRIND AND 1" OVERLAY) OR AS DIRECTED BY CITY ENGINEER/INSPECTOR
(19) REMOVE EXISTING AC PAVEMENT
(24) CONSTRUCT CURB OUTLET PER CITY OF MENIFEE STD. PLAN NO. 304.

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
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DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253 EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

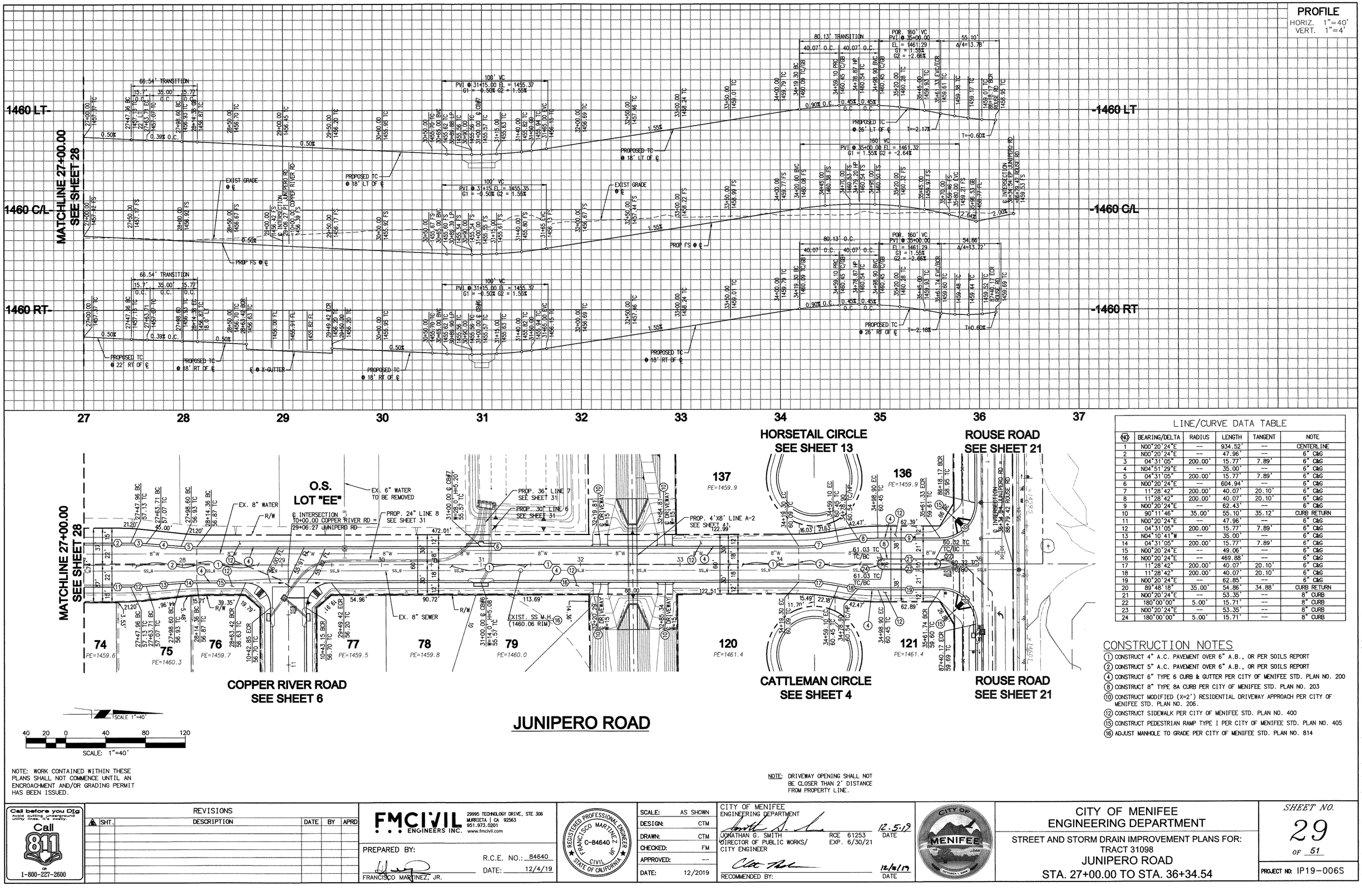
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
JUNIPERO ROAD
STA. 19+34.63 TO STA. 27+00.00

SHEET NO. 28 OF 51

PROJECT NO: IP19-006S

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LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N00°20'24"E	---	934.52'	---	CENTERLINE
2	N00°20'24"E	---	47.96'	---	6" C&G
3	04°31'05"	200.00'	15.77'	7.89'	6" C&G
4	N04°51'29"E	---	35.00'	---	6" C&G
5	04°31'05"	200.00'	15.77'	7.89'	6" C&G
6	N00°20'24"E	---	604.94'	---	6" C&G
7	11°28'42"	200.00'	40.07'	20.10'	6" C&G
8	11°28'42"	200.00'	40.07'	20.10'	6" C&G
9	N00°20'24"E	---	62.43'	---	6" C&G
10	90°11'46"	35.00'	55.10'	35.12'	CURB RETURN
11	N00°20'24"E	---	47.96'	---	6" C&G
12	04°31'05"	200.00'	15.77'	7.89'	6" C&G
13	N04°10'41"W	---	35.00'	---	6" C&G
14	04°31'05"	200.00'	15.77'	7.89'	6" C&G
15	N00°20'24"E	---	49.06'	---	6" C&G
16	N00°20'24"E	---	469.88'	---	6" C&G
17	11°28'42"	200.00'	40.07'	20.10'	6" C&G
18	11°28'42"	200.00'	40.07'	20.10'	6" C&G
19	N00°20'24"E	---	62.85'	---	6" C&G
20	89°48'18"	35.00'	54.86'	34.88'	CURB RETURN
21	N00°20'24"E	---	53.35'	---	8" CURB
22	180°00'00"	5.00'	15.71'	---	8" CURB
23	N00°20'24"E	---	53.35'	---	8" CURB
24	180°00'00"	5.00'	15.71'	---	8" CURB

CONSTRUCTION NOTES

(1) CONSTRUCT 4" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(2) CONSTRUCT 5" A.C. PAVEMENT OVER 6" A.B., OR PER SOILS REPORT
(4) CONSTRUCT 6" TYPE 6 CURB & GUTTER PER CITY OF MENIFEE STD. PLAN NO. 200
(8) CONSTRUCT 8" TYPE 8A CURB PER CITY OF MENIFEE STD. PLAN NO. 203
(10) CONSTRUCT MODIFIED (X=2') RESIDENTIAL DRIVEWAY APPROACH PER CITY OF MENIFEE STD. PLAN NO. 206.
(12) CONSTRUCT SIDEWALK PER CITY OF MENIFEE STD. PLAN NO. 400
(15) CONSTRUCT PEDESTRIAN RAMP TYPE I PER CITY OF MENIFEE STD. PLAN NO. 405
(16) ADJUST MANHOLE TO GRADE PER CITY OF MENIFEE STD. PLAN NO. 814

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

NOTE: DRIVEWAY OPENING SHALL NOT BE CLOSER THAN 2' DISTANCE FROM PROPERTY LINE.

Call before you Dig
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REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
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DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

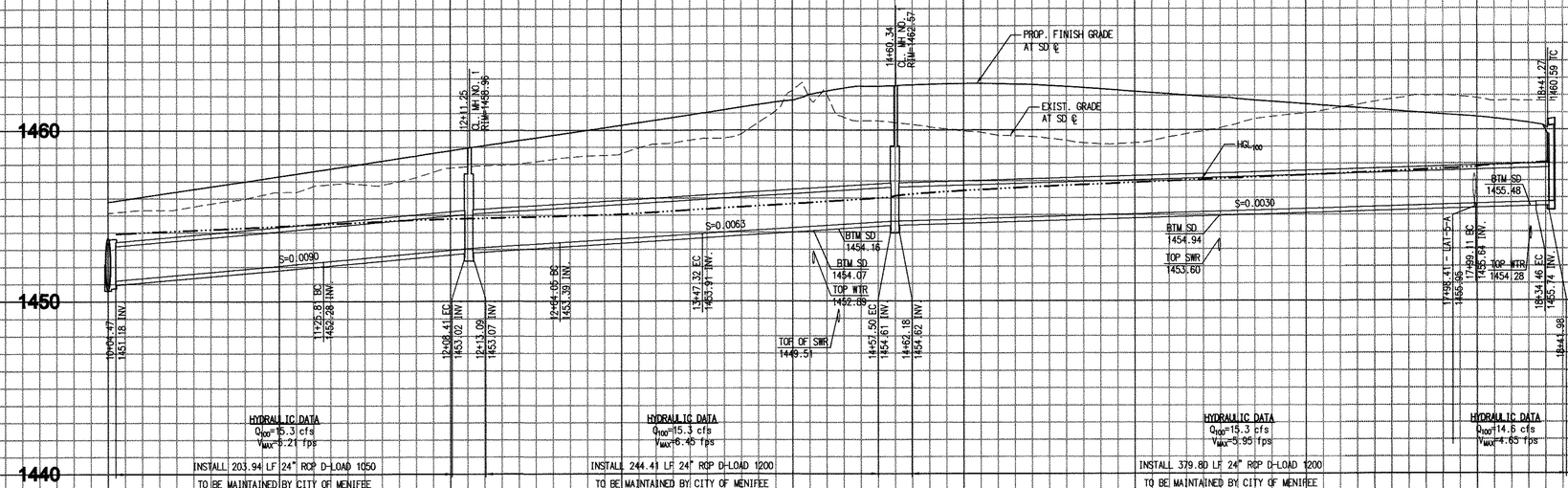
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
JUNIPERO ROAD
STA. 27+00.00 TO STA. 36+34.54

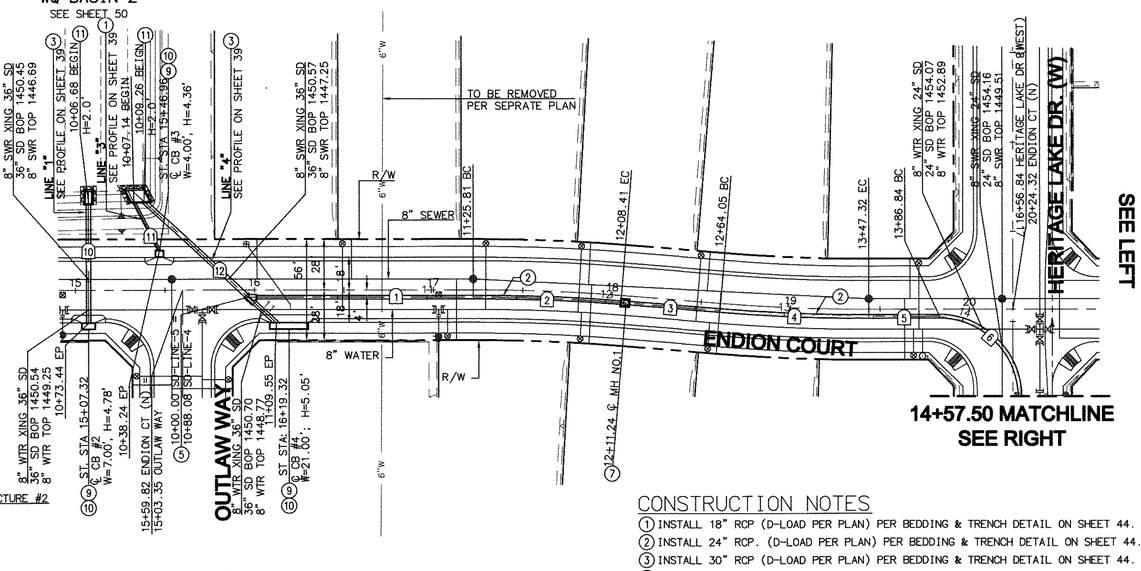
SHEET NO. 29 OF 51
PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'



PROFILE: LINE "5"



JUNCTION STRUCTURE #2
A=42.48°
B=24"
C=4.89'
D=30"
E=3.81'
L=4.26'

JUNCTION STRUCTURE #2
A=35°
B=18"
C=4.93'
D=24"
E=3.75'
L=3.92'

CONSTRUCTION NOTES
1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
2. INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
3. INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
5. CONSTRUCT J.S. NO. 2 PER R.C.F.C. & W.C.D STD. DWG. NO. JS 227.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
11. CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 48.

PLAN: LINE "5"

SCALE 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

SCALE: 1"=40'

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 00°06'55" W	--	125.81'	--	24" RCP-LINE "5"
2	04°45'08"	995.95'	82.61'	41.33'	24" RCP-LINE "5"
3	N 04°38'12" E	--	55.63'	--	24" RCP-LINE "5"
4	04°45'07"	1004.00'	83.27'	41.66'	24" RCP-LINE "5"
5	N 00°06'55" W		39.51'		24" RCP-LINE "5"
6	90°00'00"	45.00'	70.69'	45.00'	24" RCP-LINE "5"
7	N 89°53'05" E	--	341.60'	--	24" RCP-LINE "5"
8	45°00'00"	45.00'	35.34'	18.64'	24" RCP-LINE "5"
9	N 44°53'05" E	--	7.52'	--	24" RCP-LINE "5"
10	N 89°53'05" E	--	66.76'	--	30" RCP-LINE "1"
11	N 62°29'47" E	--	31.11'	--	18" RCP-LINE "3"
12	N 42°22'09" E	--	100.29'	--	30" RCP-LINE "4"
13	N 55°06'55" W		46.20'		18" RCP-LAT "5-A"

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

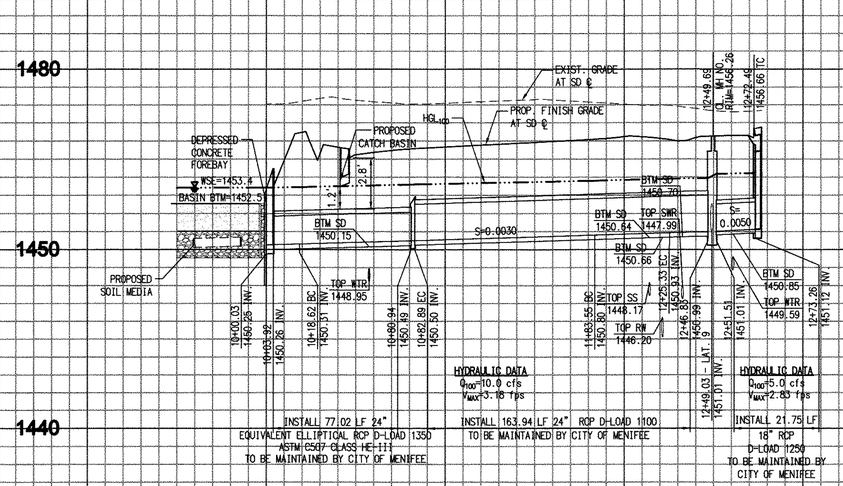
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LINE "5" PLAN AND PROFILE
LINE "1"
LINE "3"
LINE "4"

SHEET NO. 30 OF 51

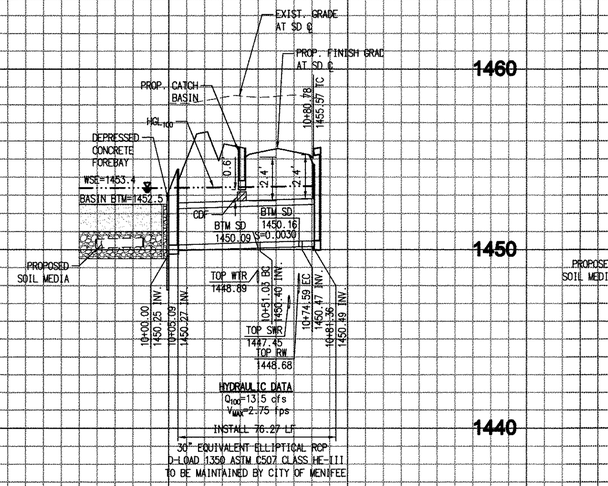
PROJECT NO: IP19-006S

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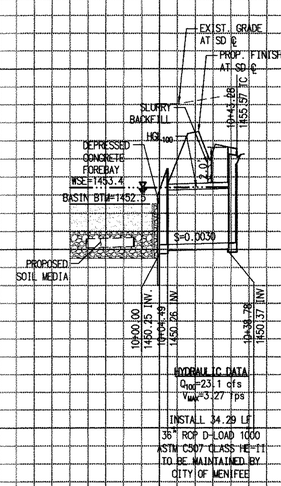
PROFILE
HORIZ. 1"=40'
VERT. 1"=4'



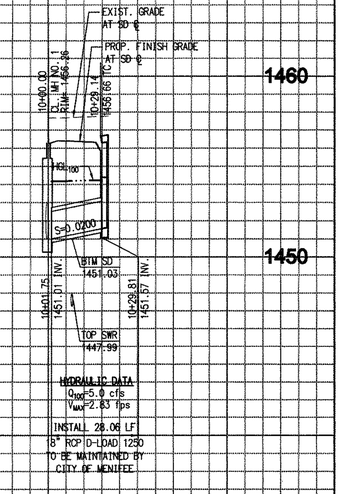
PROFILE: LINE "8"



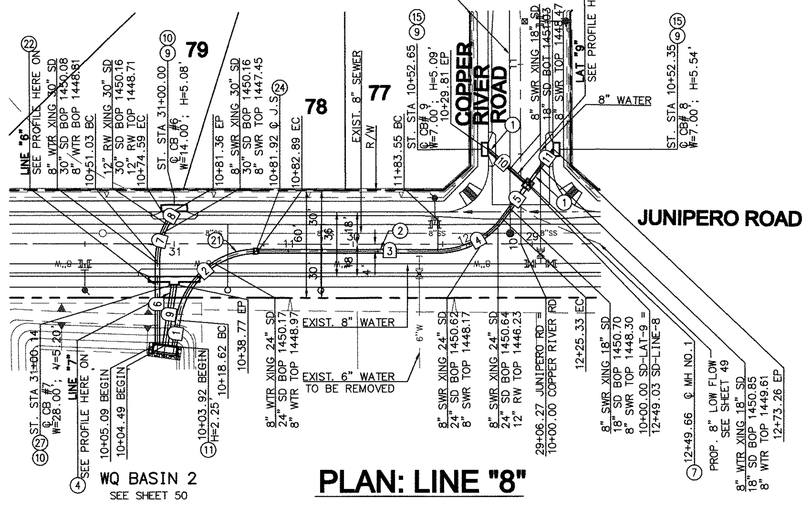
PROFILE: LINE "6"



PROFILE: LINE "7"



PROFILE: LAT "9"



PLAN: LINE "8"

CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
2. INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
4. INSTALL 36" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
11. CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 48.
15. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE B.
21. INSTALL 24" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
22. INSTALL 30" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
24. CONSTRUCT T.S. NO. 3 PER R.C.F.C. & W.C.D. STD. DWG. NO. TS 303.
27. CONSTRUCT CATCH BASIN CURB INLET TYPE B-2 PER DETAIL ON SHEET 44.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 81°29'16" W	---	14.70'	---	24" EEP RCP-LINE "8"
2	81°49'40"	45.00'	64.27'	39.00'	24" EEP RCP-LINE "8"
3	N 00°20'24" E	---	100.66'	---	24" RCP-LINE "8"
4	53°11'44"	45.00'	41.78'	22.53'	24" RCP-LINE "8"
5	N 52°51'20" W	---	21.49'	---	24" RCP-LINE "8"
6	N 89°39'36" W	---	47.33'	---	30" EEP RCP-LINE "6"
7	30°00'00"	45.00'	23.56'	12.06'	30" EEP RCP-LINE "6"
8	N 59°39'36" W	---	6.76'	---	30" EEP RCP-LINE "6"
9	N 81°29'16" W	---	35.04'	---	36" RCP-LINE "7"
10	N 41°21'25" E	---	29.81'	---	18" RCP-LAT "9"
11	N 52°51'20" W	---	21.75'	---	18" RCP-LINE "8"

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com
PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19
REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH' RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE ENGINEERING DEPARTMENT

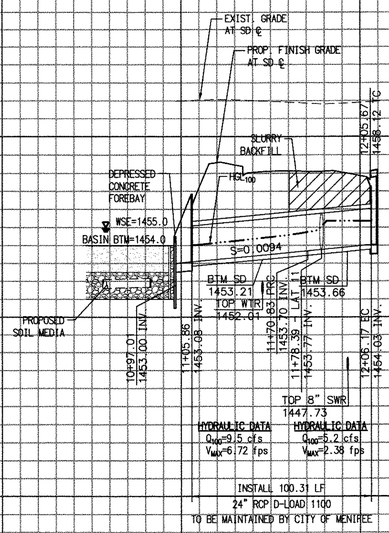
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LINE "8" PLAN AND PROFILE
LINE "7" PLAN AND PROFILE
LINE "6" PLAN AND PROFILE
LAT "9" PLAN AND PROFILE

SHEET NO. 31 OF 51

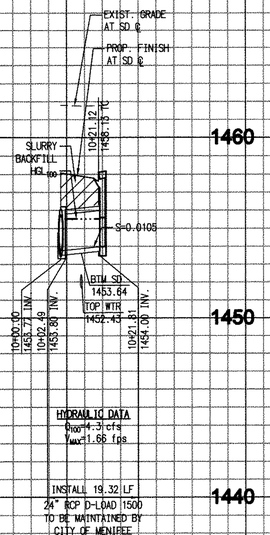
PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'



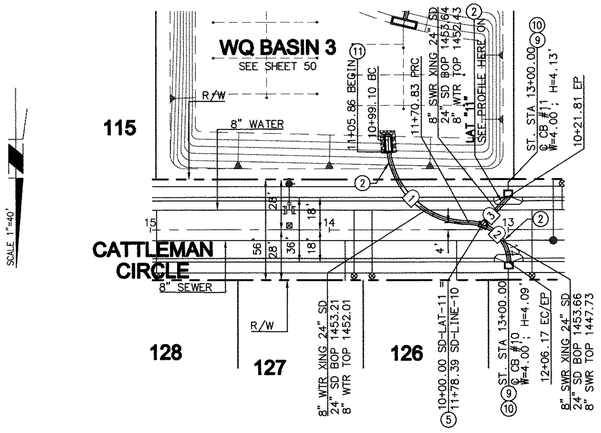
PROFILE: LINE "10"



PROFILE: LAT "11"

10 11 12 13 10 11

JUNCTION STRUCTURE #2
A=65.50'
B=24"
C=2.89'
D=24"
E=2.22'
L=3.15'

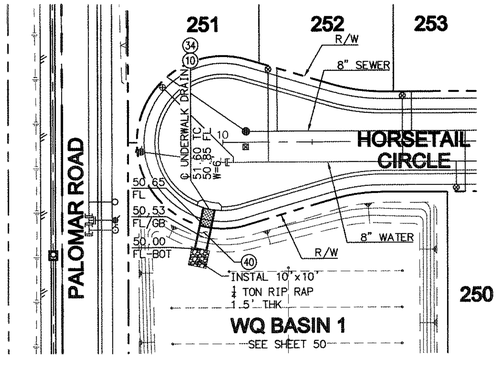


PLAN: LINE "10"

CONSTRUCTION NOTES

(2) INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
(5) CONSTRUCT J.S. NO. 2 PER R.C.F.C. & W.C.D STD. DWG. NO. JS 227.
(9) CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
(10) CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
(11) CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 48.
(34) CONSTRUCT CURB OPENING PER DETAIL ON SHEET 48. OUTLET SHALL DRAIN AT 1/4": 1' MIN. AWAY FROM CURB & GUTTER (WIDTH PER PLAN).
(40) CONSTRUCT CONCRETE "U" CHANNEL PER DETAIL ON SHEET 48.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	91°20'03"	45.00'	71.73'	46.06'	24" RCP-LINE "10"
2	90°00'00"	22.50'	35.34'	22.50'	24" RCP-LINE "10"
3	N 43°53'24" E	--	21.81'	--	24" RCP-LAT "11"



UNDERWALK DRAIN DETAIL

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

40 20 0 40 80 120
SCALE: 1"=40'

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
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MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH RCE 61253
DIRECTOR OF PUBLIC WORKS/ EXP. 6/30/21
CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

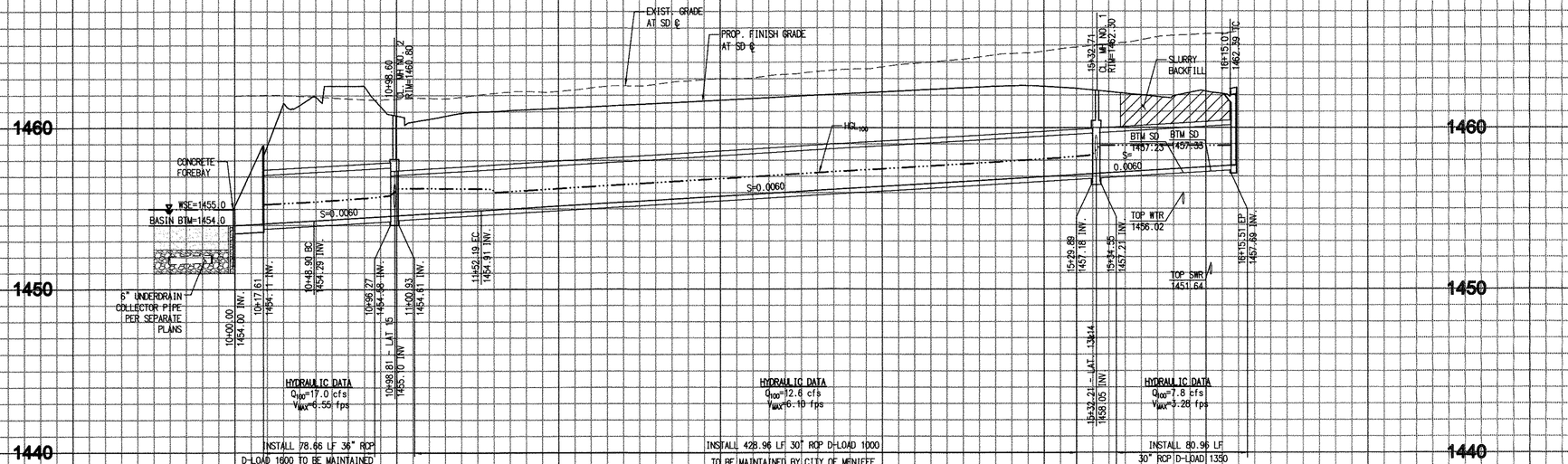
CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LINE "10" PLAN AND PROFILE
LAT "11" PLAN AND PROFILE

SHEET NO. 32 OF 51
PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'

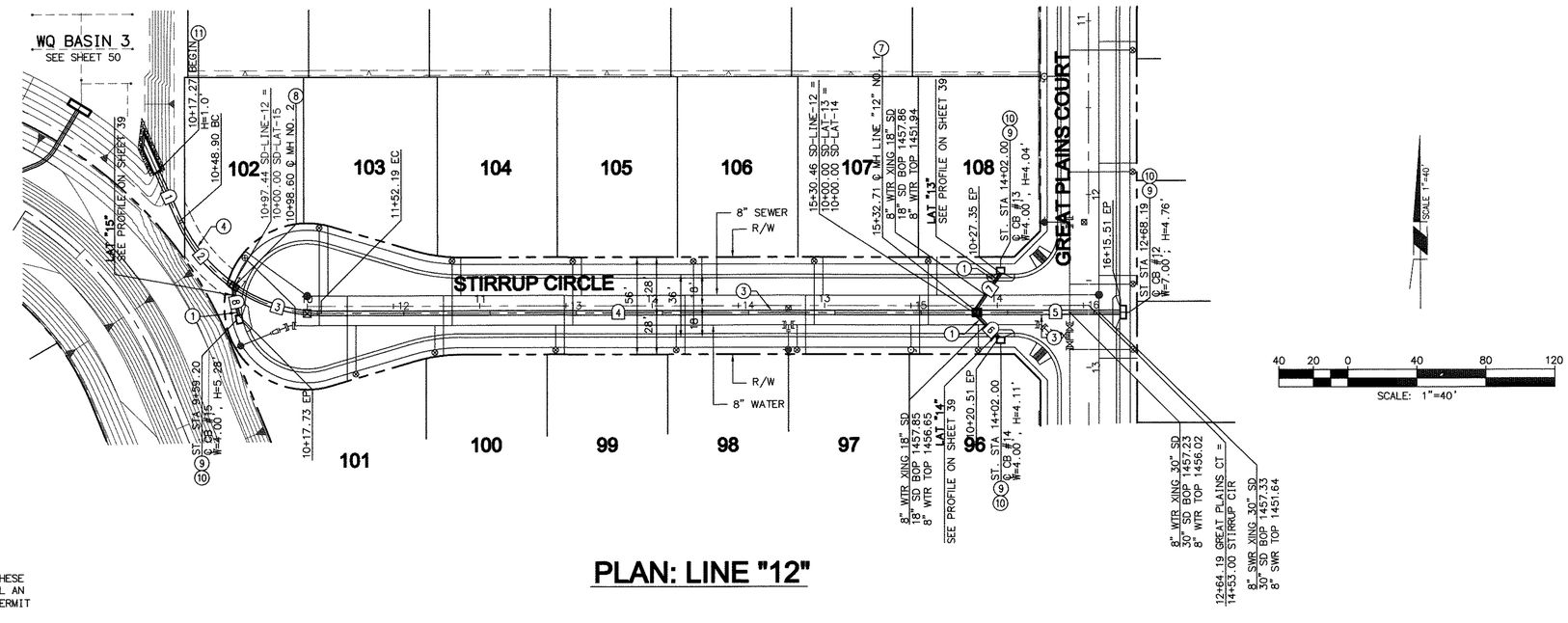


HYDRAULIC DATA
Q_{100}=17.0 cfs
V_{MAX}=6.55 fps
INSTALL 78.66 LF 36" RCP D-LOAD 1600 TO BE MAINTAINED BY CITY OF MENIFEE

HYDRAULIC DATA
Q_{100}=12.6 cfs
V_{MAX}=6.10 fps
INSTALL 428.96 LF 30" RCP D-LOAD 1000 TO BE MAINTAINED BY CITY OF MENIFEE

HYDRAULIC DATA
Q_{100}=7.8 cfs
V_{MAX}=3.28 fps
INSTALL 80.96 LF 30" RCP D-LOAD 1350 TO BE MAINTAINED BY CITY OF MENIFEE

PROFILE: LINE "12"



PLAN: LINE "12"

CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
3. INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
4. INSTALL 36" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
8. CONSTRUCT M.H. NO. 2 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 252.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
11. CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 48.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N24°05'47"W	---	31.29'	36" RCP-LINE "12"
2	30°09'27"	90.00'	47.37'	36" RCP-LINE "12"
3	32°37'47"	90.00'	51.25'	30" RCP-LINE "12"
4	N89°51'20"W	---	377.68'	30" RCP-LINE "12"
5	N89°51'20"W	---	80.96'	30" RCP-LINE "12"
6	N44°51'20"W	---	18.03'	18" RCP-LAT "14"
7	N34°47'37"E	---	25.22'	18" RCP-LAT "13"
8	N11°34'13"W	---	15.81'	18" RCP-LAT "15"

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12-5-19 DATE
RECOMMENDED BY:
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CITY OF MENIFEE
ENGINEERING DEPARTMENT

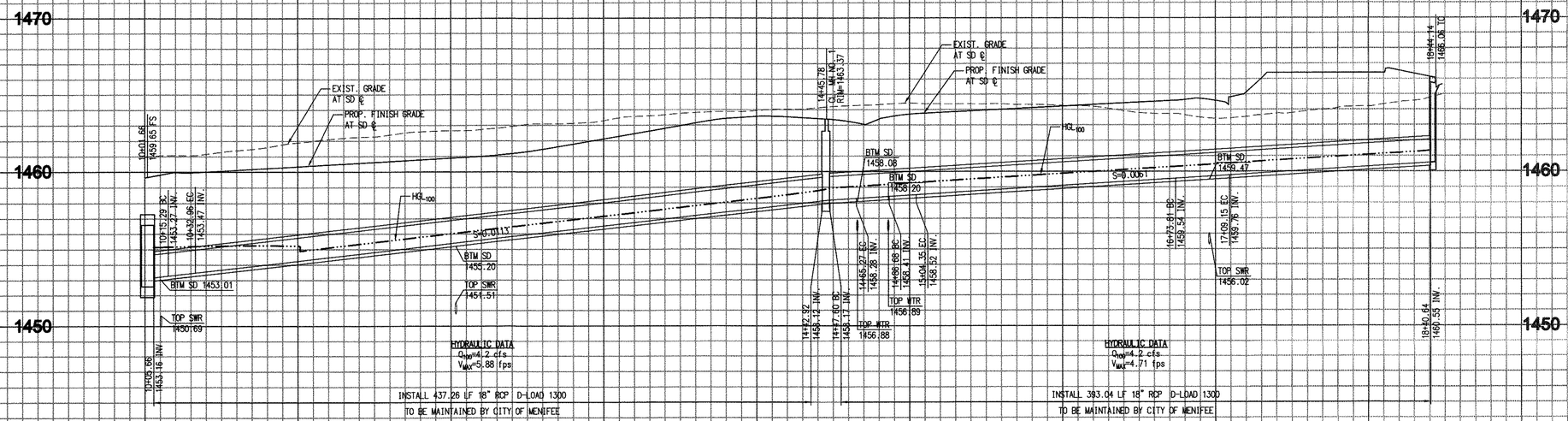
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LINE "12" PLAN AND PROFILE
LAT "13"
LAT "14"

SHEET NO. 33 OF 51
PROJECT NO: IP19-006S

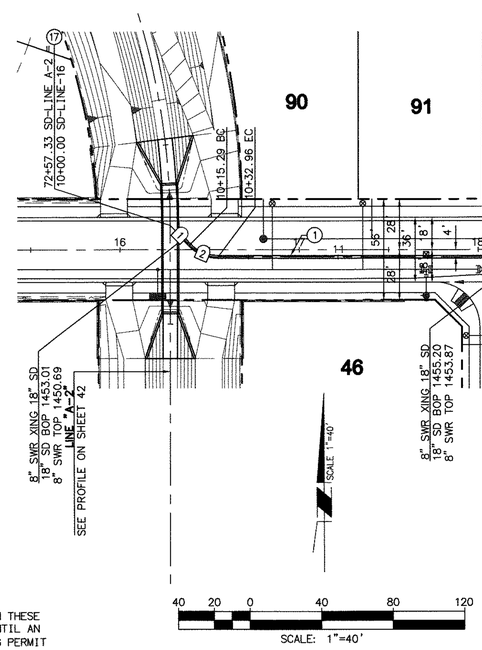
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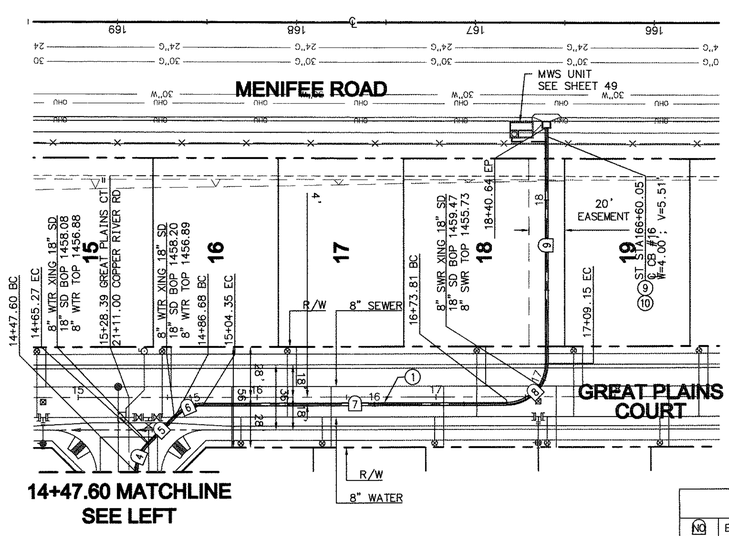
PROFILE

HORIZ. 1"=40'
VERT. 1"=4'



PROFILE: LINE "16"





SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
17. CONSTRUCT J.S. NO. 3 PER R.C.F.C W.C.D. STD. DWG. NO. JS 228.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 44°51'20" W	---	15.29'	---	18" RCP-LINE "16"
2	45°00'00"	22.50'	17.67'	9.32'	18" RCP-LINE "16"
3	N 89°51'20" W	---	414.64'	---	18" RCP-LINE "16"
4	45°00'00"	22.50'	17.67'	9.32'	18" RCP-LINE "16"
5	N 44°51'20" W	---	21.41'	---	18" RCP-LINE "16"
6	45°00'00"	22.50'	17.67'	9.32'	18" RCP-LINE "16"
7	N 00°08'40" E	---	169.46'	---	18" RCP-LINE "16"
8	90°00'00"	22.50'	35.34'	22.50'	18" RCP-LINE "16"
9	N 89°51'20" W	---	131.49'	---	18" RCP-LINE "16"

PLAN: LINE "16"

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REVISIONS

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FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
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PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

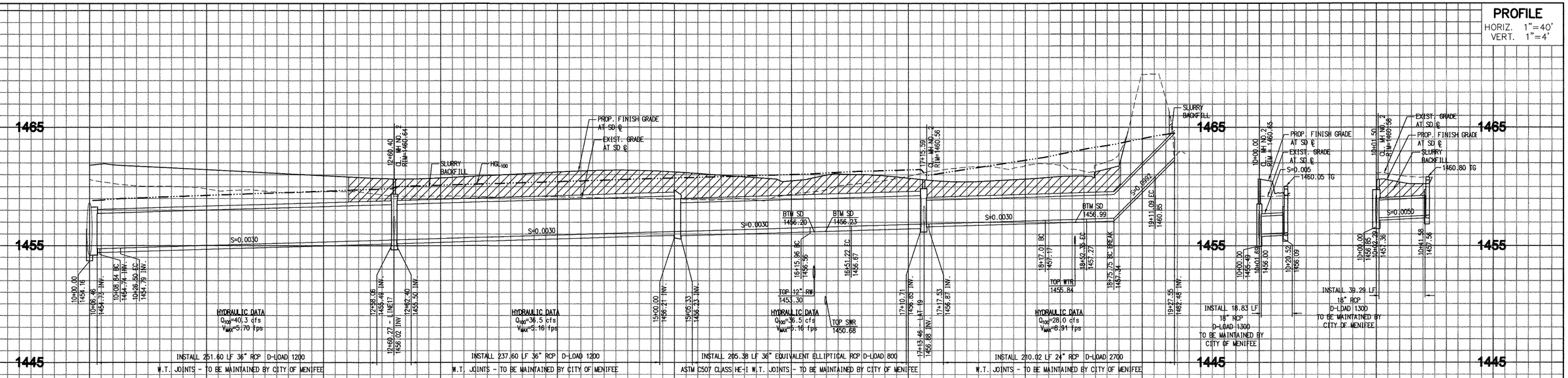
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

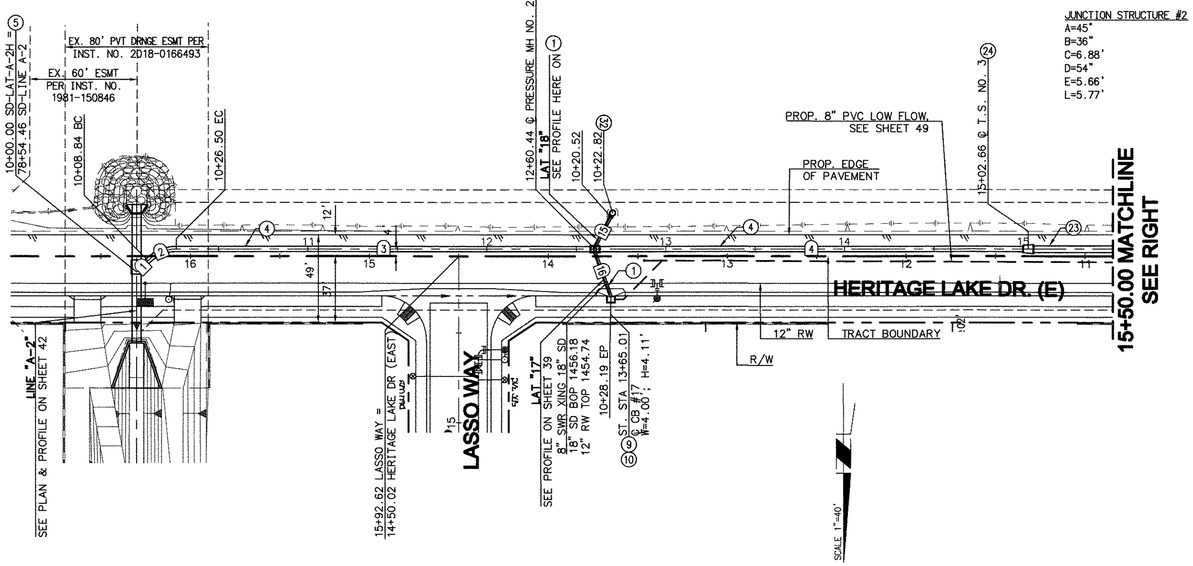
LINE "16" PLAN AND PROFILE

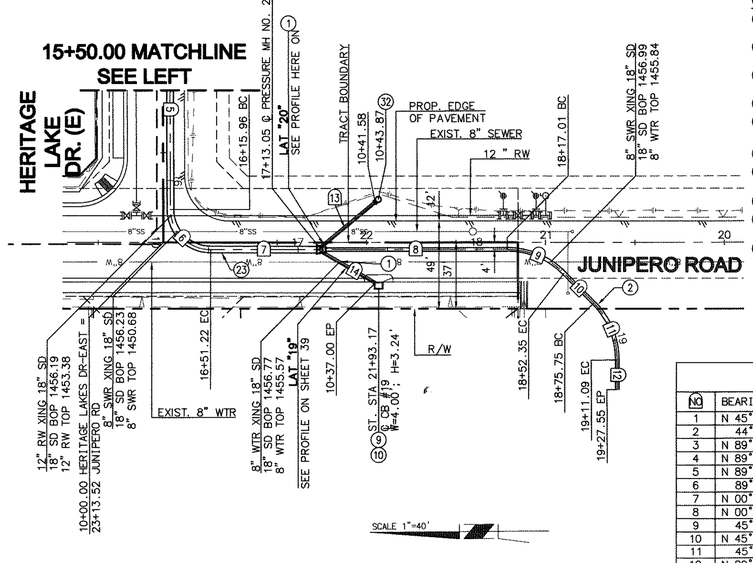
SHEET NO. 34 OF 51

PROJECT NO: IP19-006S

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CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
2. INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
4. INSTALL 36" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
5. CONSTRUCT J.S. NO. 2 PER R.C.F.C. & W.C.D STD. DWG. NO. JS 227.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
23. INSTALL 36" EQUIVALENT ELLIPTICAL RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
24. CONSTRUCT T.S. NO. 3 PER R.C.F.C. & W.C.D. STD. DWG. NO. TS 303.
25. CONSTRUCT PRESSURE M.H. NO. 2 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 252.
32. CONSTRUCT INLET TYPE X PER RIVERSIDE COUNTY FLOOD CONTROL DISTRCIT STD. DWG. CB 108.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 45°08'40" E	---	8.84'	---	36" RCP-LAT "A-2H"
2	44°59'04"	22.50'	17.67'	9.32'	36" RCP-LAT "A-2H"
3	N 89°52'16" W	---	231.61'	---	36" RCP-LAT "A-2H"
4	N 89°52'16" W	---	237.23'	---	36" RCP-LAT "A-2H"
5	N 89°52'16" W	---	110.64'	---	36" EEP RCP-LAT "A-2H"
6	89°47'20"	22.50'	35.26'	22.42'	36" EEP RCP-LAT "A-2H"
7	N 00°20'24" E	---	59.49'	---	36" EEP RCP-LAT "A-2H"
8	N 00°20'24" E	---	101.63'	---	24" RCP-LAT "A-2H"
9	45°00'00"	45.00'	35.34'	18.64'	24" RCP-LAT "A-2H"
10	N 45°20'24" E	---	23.40'	---	24" RCP-LAT "A-2H"
11	45°00'00"	45.00'	35.34'	18.64'	24" RCP-LAT "A-2H"
12	N 89°39'36" W	---	16.46'	---	24" RCP-LAT "A-2H"
13	N 39°14'55" W	---	39.29'	---	18" RCP-LAT "20"
14	N 30°20'24" E	---	34.27'	---	18" RCP-LAT "19"
15	N27°41'09"E	---	18.83'	---	18" RCP-LAT "18"
16	N19°52'16"W	---	26.59'	---	18" RCP-LAT "17"

PLAN: LAT "A-2H"

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253 EXP. 6/30/21
12/5/19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

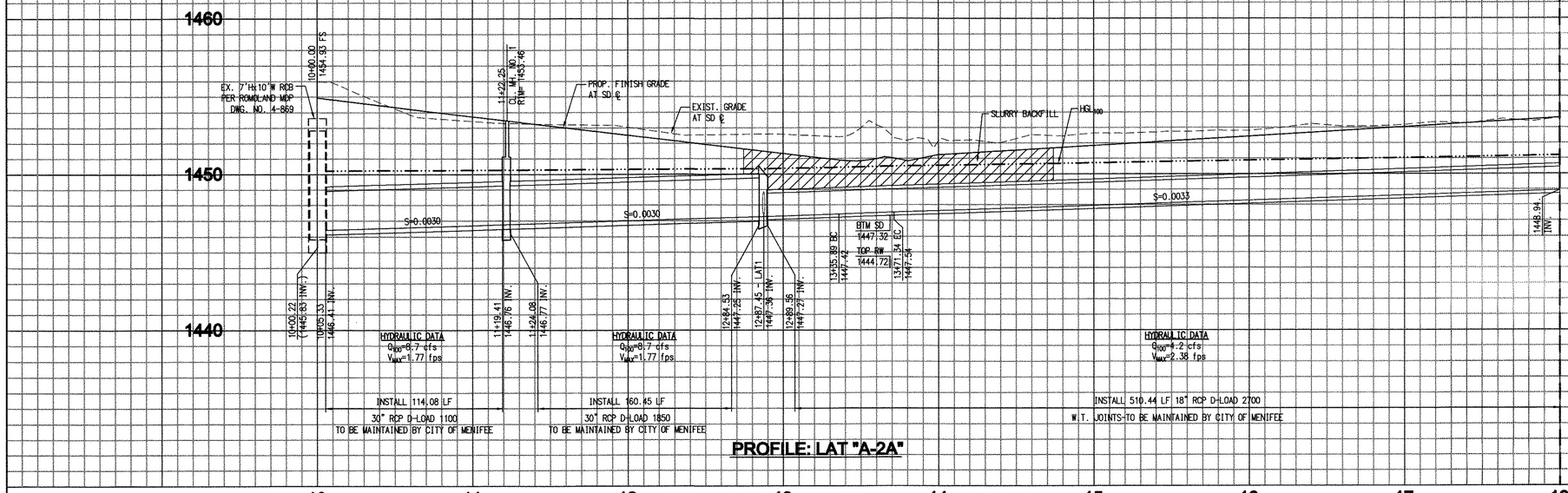
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LAT "A-2H" PLAN AND PROFILE
LAT "18", LAT "20" PLAN AND PROFILE
LAT "17", LAT "19"

SHEET NO. 35 OF 51

PROJECT NO: IP19-006S

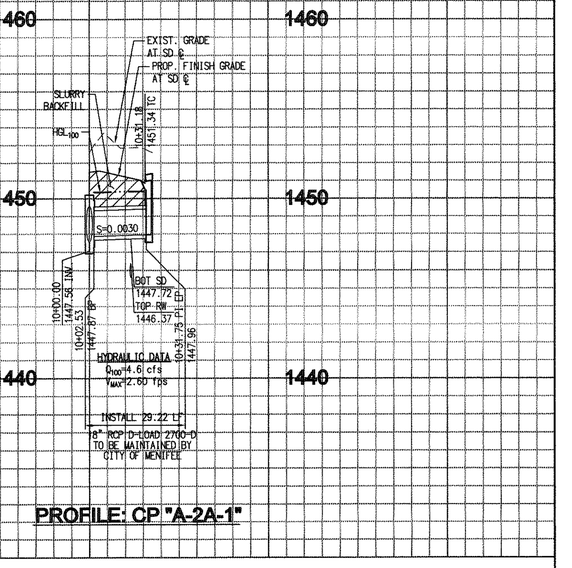
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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'

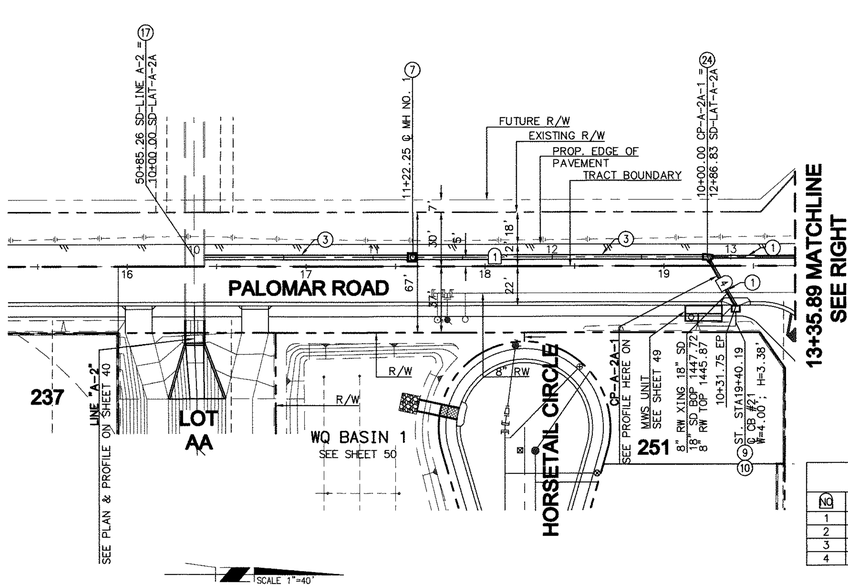


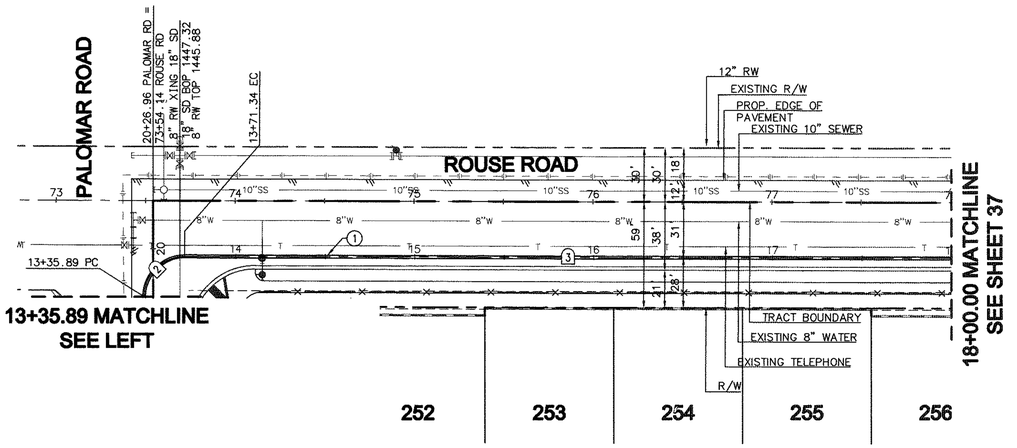
PROFILE: LAT "A-2A"

18+00.00 MATCHLINE SEE SHEET 37



PROFILE: CP "A-2A-1"





PLAN: LAT "A-2A"

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 00°07'10" W	---	335.89'	---	30" RCP/18" RCP-LAT "A-2A"
2	90°15'49"	21.75'	34.26'	21.85'	18" RCP-LAT "A-2A"
3	N 89°51'21" W	---	428.66'	---	18" RCP-LAT "A-2A"
4	N 59°52'50" E	---	31.75'	---	18" RCP-LAT "CP-A-2A-1"

CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
3. INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
10. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE C.
17. CONSTRUCT J.S. NO. 3 PER R.C.F.C W.C.D. STD. DWG. NO. JS 228.
24. CONSTRUCT T.S. NO. 3 PER R.C.F.C. & W.C.D. STD. DWG. NO. TS 303.

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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Avoid cutting underground utility lines. It's costly.
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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

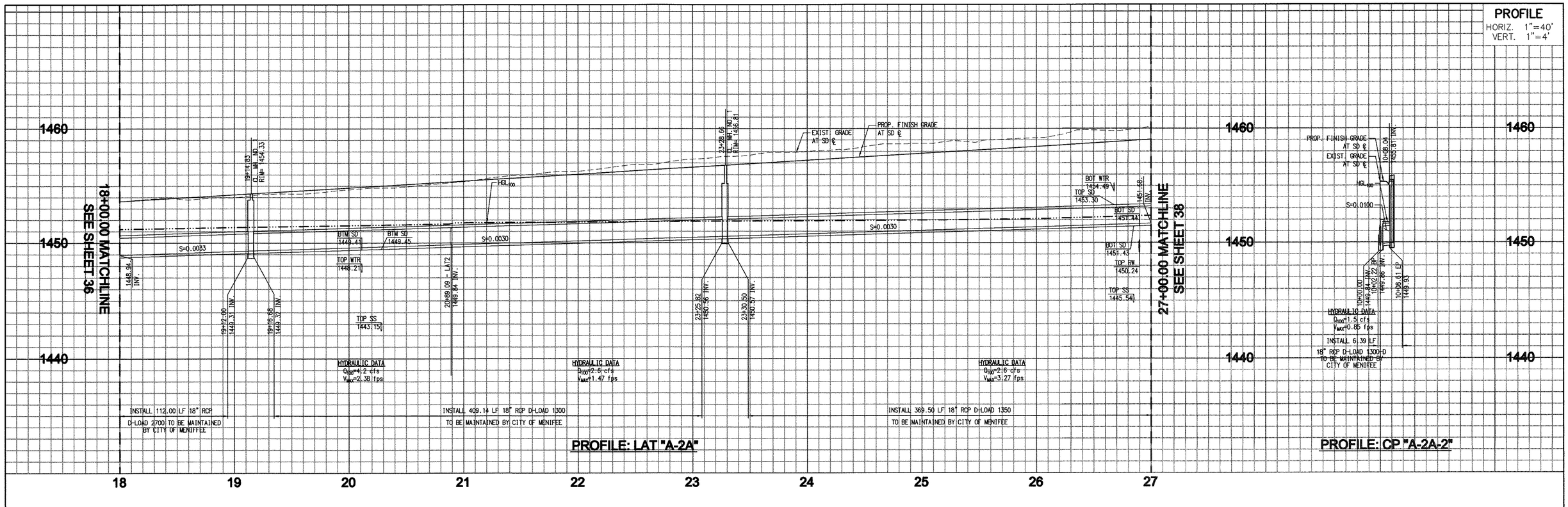
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

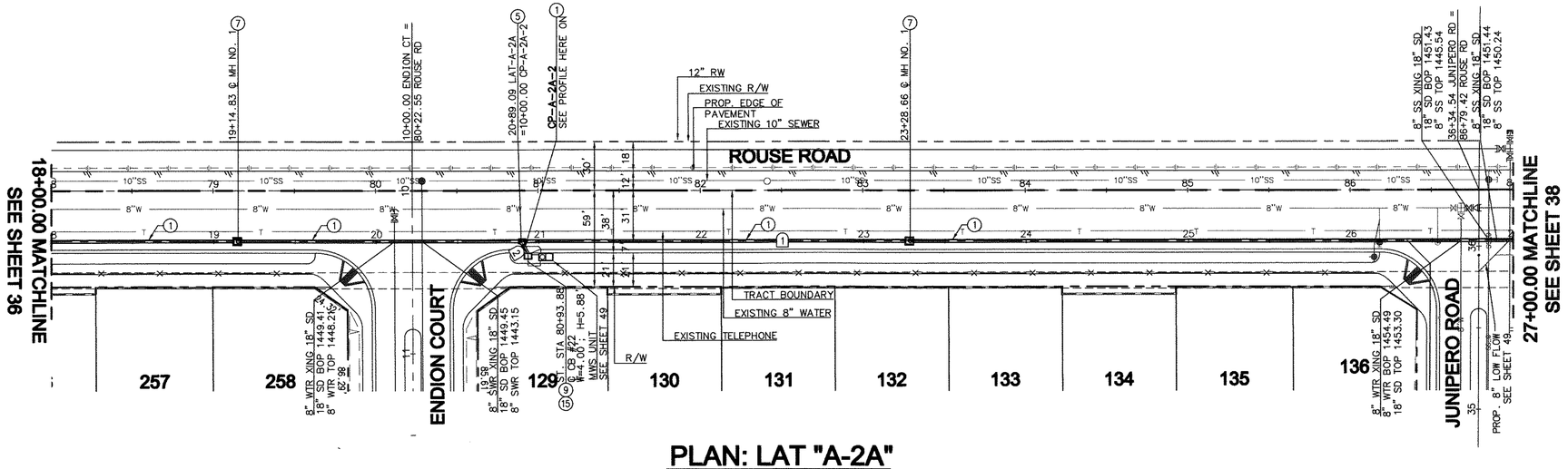
LAT "A-2A" PLAN AND PROFILE
CP "A-2A-1" PLAN AND PROFILE

SHEET NO. 36 OF 51

PROJECT NO: IP19-006S

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PLAN: LAT "A-2A"

CONSTRUCTION NOTES

1. INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
5. CONSTRUCT J.S. NO. 2 PER R.C.F.C. & W.C.D STD. DWG. NO. JS 227.
7. CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
9. CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
15. CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE B.

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 89°51'21" W	---	900.00'	---	18" RCP-LAT "A-2A"
2	N 29°22'47" W	---	8.61'	---	18" RCP-LAT "CP-A-2A-2"

JUNCTION STRUCTURE #2
A=60"
B=18"
C=2.63'
D=18"
E=1.93'
L=2.59'

SCALE 1"=40'

40 20 0 40 80 120
SCALE: 1"=40'

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS				
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FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LAT "A-2A" PLAN AND PROFILE
CP "A-2A-2" PLAN AND PROFILE

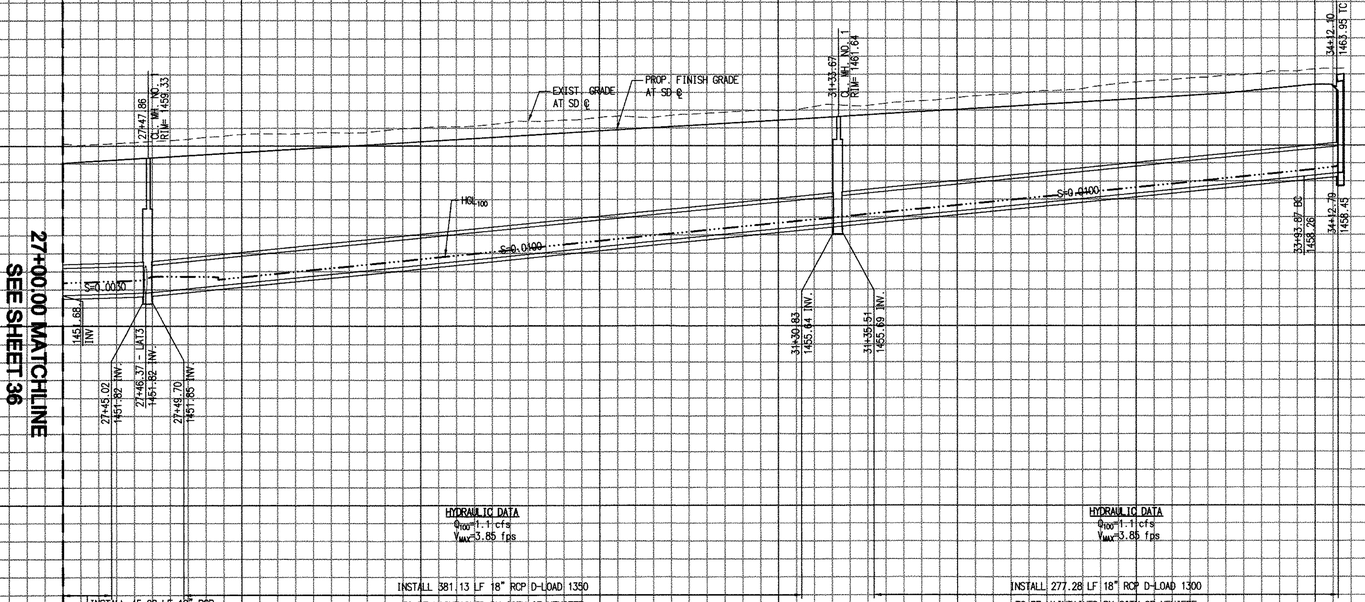
SHEET NO. 37 OF 51

PROJECT NO: IP19-006S

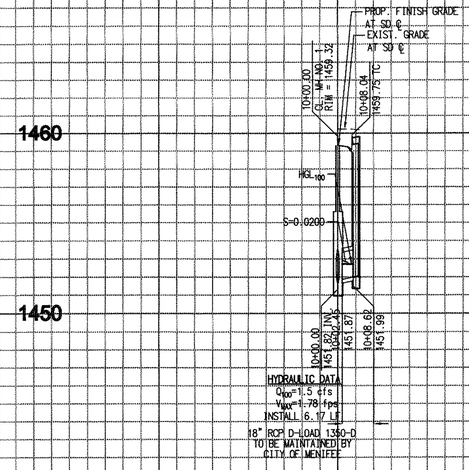
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PROFILE

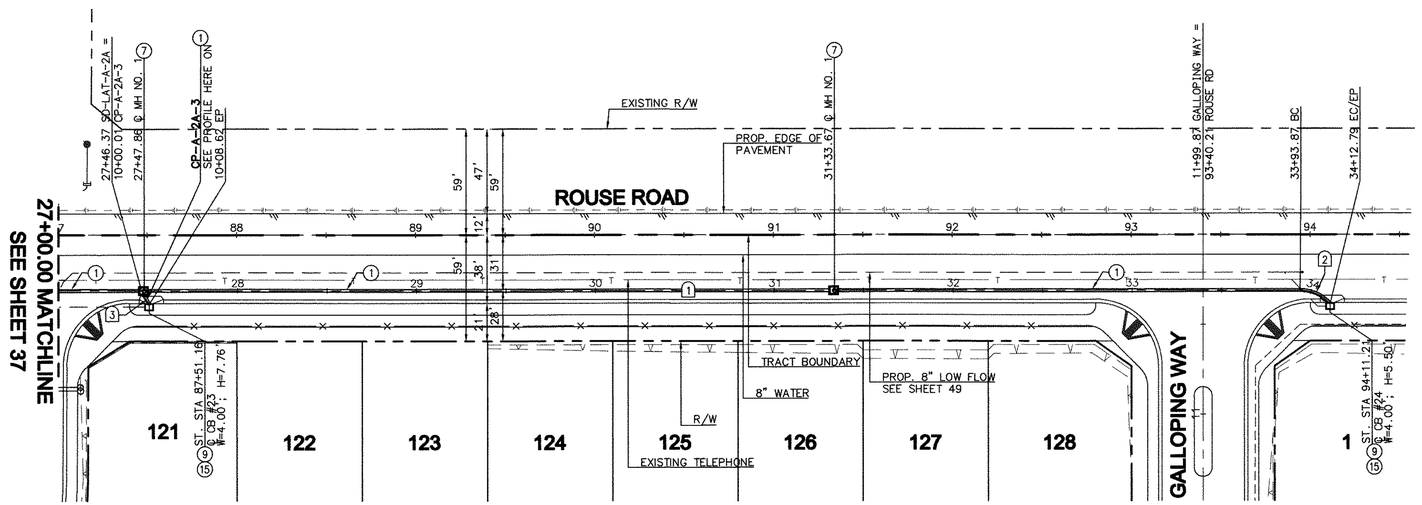
HORIZ. 1"=40'
VERT. 1"=4'



PROFILE: LAT "A-2A"



PROFILE: CP "A-2A-3"



PLAN: LAT "A-2A"

SCALE 1"=40'

CONSTRUCTION NOTES

(1) INSTALL 18" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
(7) CONSTRUCT M.H. NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO. MH 251.
(9) CONSTRUCT CATCH BASIN PER R.C.T.D. STD. NO. 300 (V MEASURES FROM TC).
(15) CONSTRUCT LOCAL DEPRESSION PER R.C.T.D. STD. DWG. 311 CASE B.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 89°51'21" W	---	693.87'	---	18" RCP-LAT "A-2A"
2	48°10'36"	22.50'	18.92'	10.06'	18" RCP-LAT "A-2A"
3	N 29°22'47" W	---	8.61'	---	18" RCP-LAT "CP-A-2A-3"

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

40 20 0 40 80 120
SCALE: 1"=40'

Call before you Dig
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Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253 EXP. 6/30/21
12.5.19 DATE

RECOMMENDED BY:
12/6/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

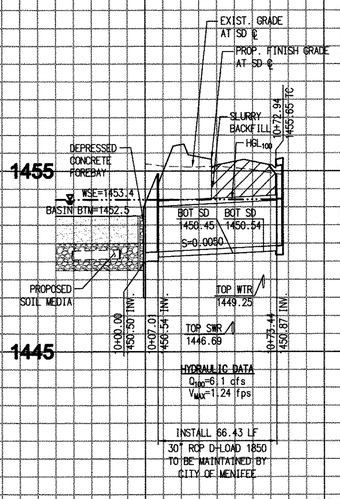
LAT "A-2A" PLAN AND PROFILE
CP "A-2A-3" PLAN AND PROFILE

SHEET NO. 38 OF 51

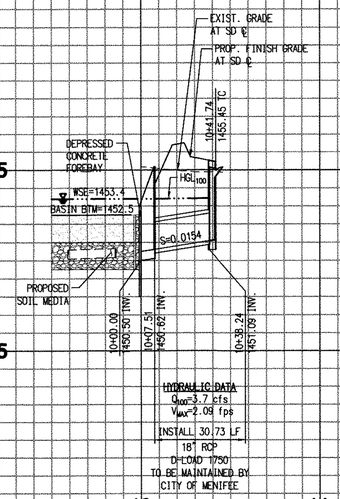
PROJECT NO: IP19-006S

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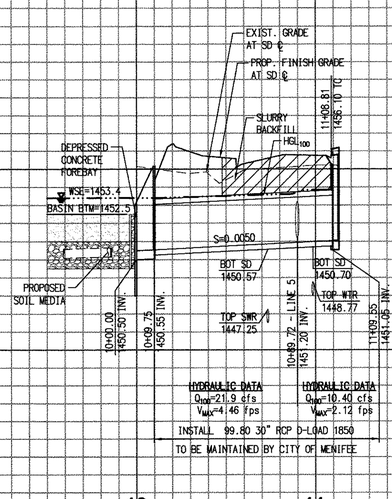
PROFILE
HORIZ. 1"=40'
VERT. 1"=4'



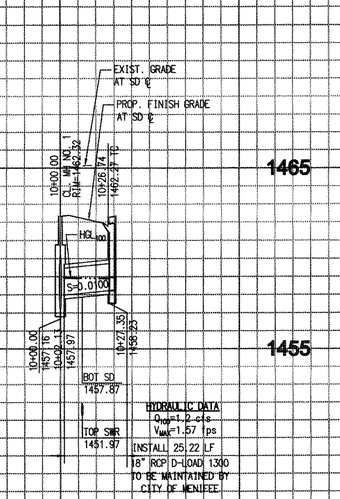
PROFILE: LINE "1"
SEE PLAN ON SHEET 30



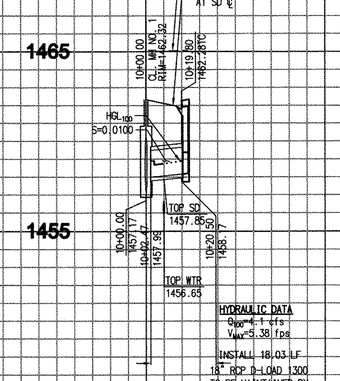
PROFILE: LINE "3"
SEE PLAN ON SHEET 30



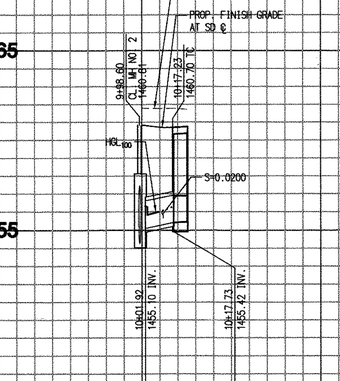
PROFILE: LINE "4"
SEE PLAN ON SHEET 30



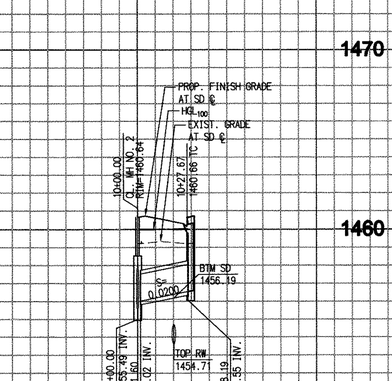
PROFILE: LAT "13"
SEE PLAN ON SHEET 33



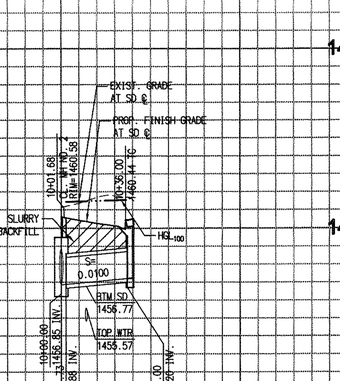
PROFILE: LAT "14"
SEE PLAN ON SHEET 33



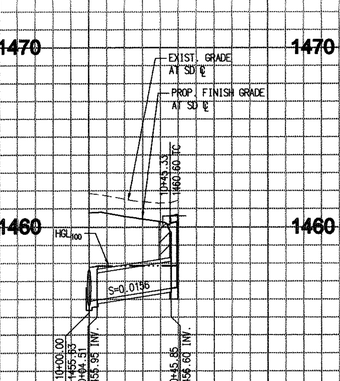
PROFILE: LAT "15"
SEE PLAN ON SHEET 33



PROFILE: LAT "17"
SEE PLAN ON SHEET 35



PROFILE: LAT "19"
SEE PLAN ON SHEET 35



PROFILE: LAT "5-A"
SEE PLAN ON SHEET 30

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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REVISIONS				
⚠ SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
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PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH — RCE 61253 — EXP. 6/30/21
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/6/19 DATE

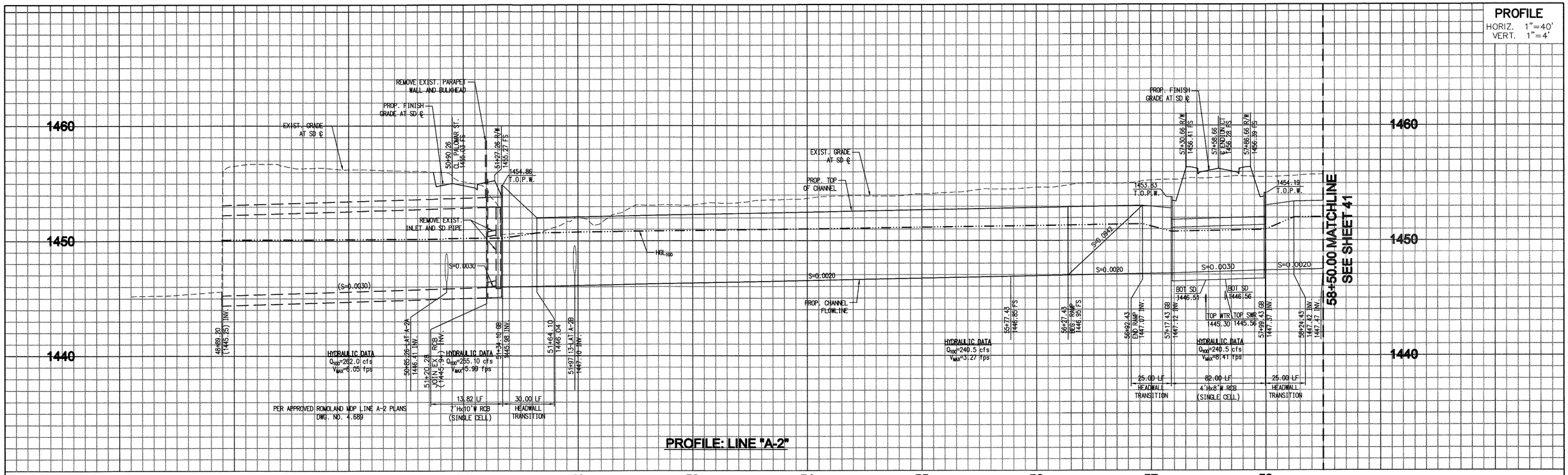
CITY OF MENIFEE

CITY OF MENIFEE
ENGINEERING DEPARTMENT
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LATERAL PROFILE SHEET

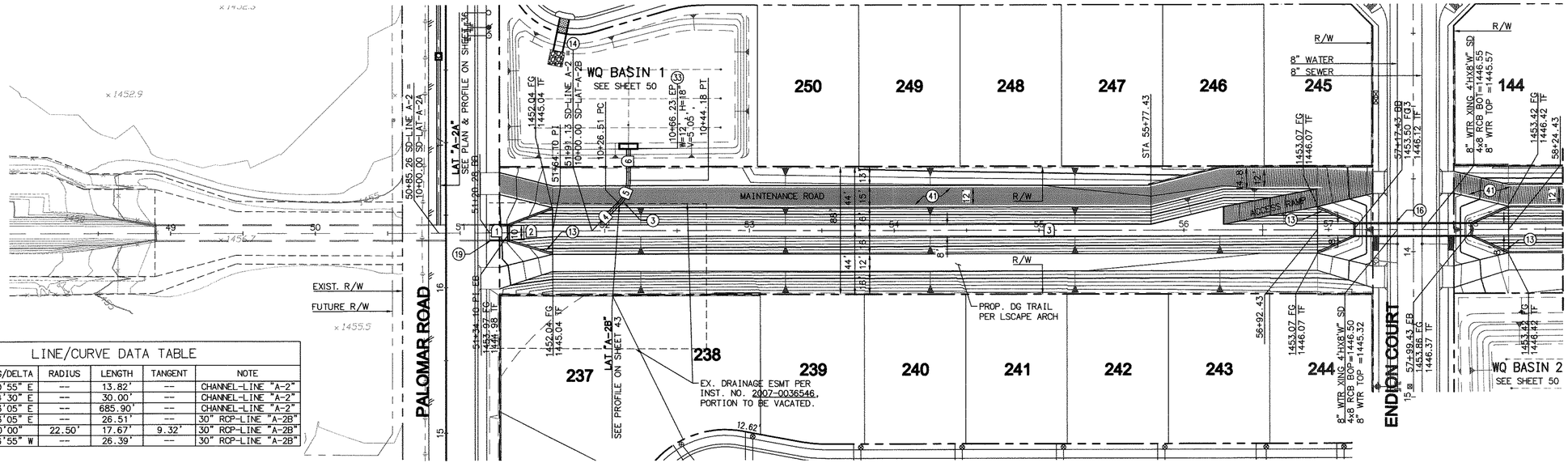
SHEET NO. 39 OF 51
PROJECT NO: IP19-006S

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PROFILE
HORIZ. 1"=40'
VERT. 1"=4'



PROFILE: LINE "A-2"



CONSTRUCTION NOTES

(3) INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
(13) CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86A, SEE DETAIL ON SHEET 47.
(14) CONSTRUCT J.S. NO. 8 PER R.C.F.C. W.C.D. STD. DWG. NO. JS 233.
(16) CONSTRUCT SINGLE RCB 4'H x 8'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.
(19) CONSTRUCT SINGLE RCB 7'H x 10'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.
(33) CONSTRUCT CONCRETE DROP INLET/OUTLET CONTROL PER RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STD. DWG. CB 110.
(41) INSTALL 3" CLASS II AGGREGATE BASE OVER 90% COMPACTED NATIVE

SCALE 1"=40'

40 20 0 40 80 120
SCALE: 1"=40'

LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 89°50'55" E	---	13.82'	---	CHANNEL-LINE "A-2"
2	N 87°24'30" E	---	30.00'	---	CHANNEL-LINE "A-2"
3	N 89°53'05" E	---	685.90'	---	CHANNEL-LINE "A-2"
4	N 44°53'05" E	---	26.51'	---	30" RCP-LINE "A-2B"
5	45°00'00"	22.50'	17.67'	9.32'	30" RCP-LINE "A-2B"
6	N 00°06'55" W	---	26.39'	---	30" RCP-LINE "A-2B"

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

PLAN: LINE "A-2"

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH, DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — RCE 61253 EXP. 6/30/21 — DATE 12.5.19
RECOMMENDED BY: — DATE 12/5/19

CITY OF MENIFEE
ENGINEERING DEPARTMENT

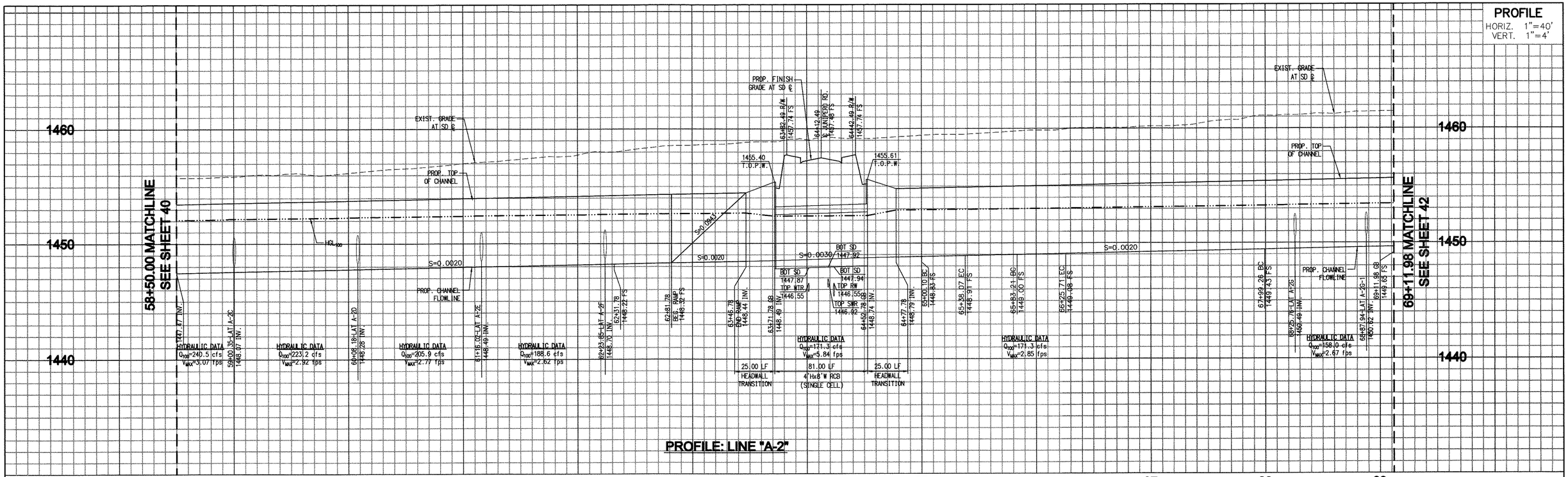
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

CHANNEL PLAN AND PROFILE

SHEET NO. 40 OF 51

PROJECT NO: IP19-006S

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CONSTRUCTION NOTES

(2) INSTALL 24" RCP. (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.

(3) INSTALL 30" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.

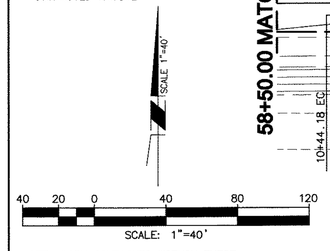
(13) CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86A, SEE DETAIL ON SHEET 47.

(14) CONSTRUCT J.S. NO. 8 PER R.C.F.C. W.C.D. STD. DWG. NO. JS 233.

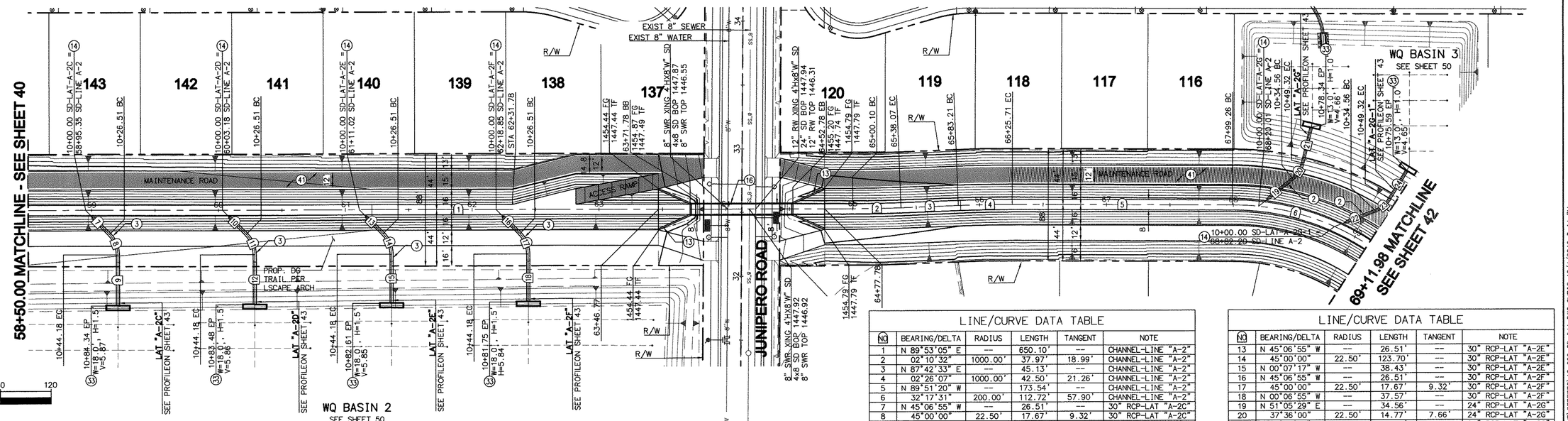
(16) CONSTRUCT SINGLE RCB 4'H x 8'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.

(33) CONSTRUCT CONCRETE DROP INLET/OUTLET CONTROL PER RIVERSIDE COUNTY FLOOD CONTROL DISTRCIT STD. DWG. CB 110.

(41) INSTALL 3" CLASS II AGGREGATE BASE OVER 90% COMPACTED NATIVE



NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.



PLAN: LINE "A-2"

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	N 89°53'05" E	---	650.10'	---	CHANNEL-LINE "A-2"
2	02°10'32"	1000.00'	37.97'	18.99'	CHANNEL-LINE "A-2"
3	N 87°42'33" E	---	45.13'	---	CHANNEL-LINE "A-2"
4	02°26'07"	1000.00'	42.50'	21.26'	CHANNEL-LINE "A-2"
5	N 89°51'20" W	---	173.54'	---	CHANNEL-LINE "A-2"
6	32°17'31"	200.00'	112.72'	57.90'	CHANNEL-LINE "A-2"
7	N 45°06'55" W	---	26.51'	---	30" RCP-LAT "A-2C"
8	45°00'00"	22.50'	17.67'	9.32'	30" RCP-LAT "A-2C"
9	N 00°06'55" W	---	40.16'	---	30" RCP-LAT "A-2C"
10	N 45°06'55" W	---	26.51'	---	30" RCP-LAT "A-2D"
11	45°00'00"	22.50'	17.67'	9.32'	30" RCP-LAT "A-2D"
12	N 00°07'16" W	---	39.30'	---	30" RCP-LAT "A-2D"

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
13	N 45°06'55" W	---	26.51'	---	30" RCP-LAT "A-2E"
14	45°00'00"	22.50'	123.70'	---	30" RCP-LAT "A-2E"
15	N 00°07'17" W	---	38.43'	---	30" RCP-LAT "A-2E"
16	N 45°06'55" W	---	26.51'	---	30" RCP-LAT "A-2F"
17	45°00'00"	22.50'	17.67'	9.32'	30" RCP-LAT "A-2F"
18	N 00°06'55" W	---	37.57'	---	30" RCP-LAT "A-2F"
19	N 51°05'29" E	---	34.56'	---	24" RCP-LAT "A-2G"
20	37°36'00"	22.50'	14.77'	7.66'	24" RCP-LAT "A-2G"
21	N 13°29'29" E	---	29.02'	---	24" RCP-LAT "A-2G"
22	N 68°54'19" E	---	34.56'	---	24" RCP-LAT "A-2G-1"
23	37°36'01"	22.50'	14.77'	7.66'	24" RCP-LAT "A-2G-1"
24	N 31°18'22" E	---	26.27'	---	24" RCP-LAT "A-2G-1"

Call before you Dig
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REVISIONS

⚠ SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

CHANNEL PLAN AND PROFILE

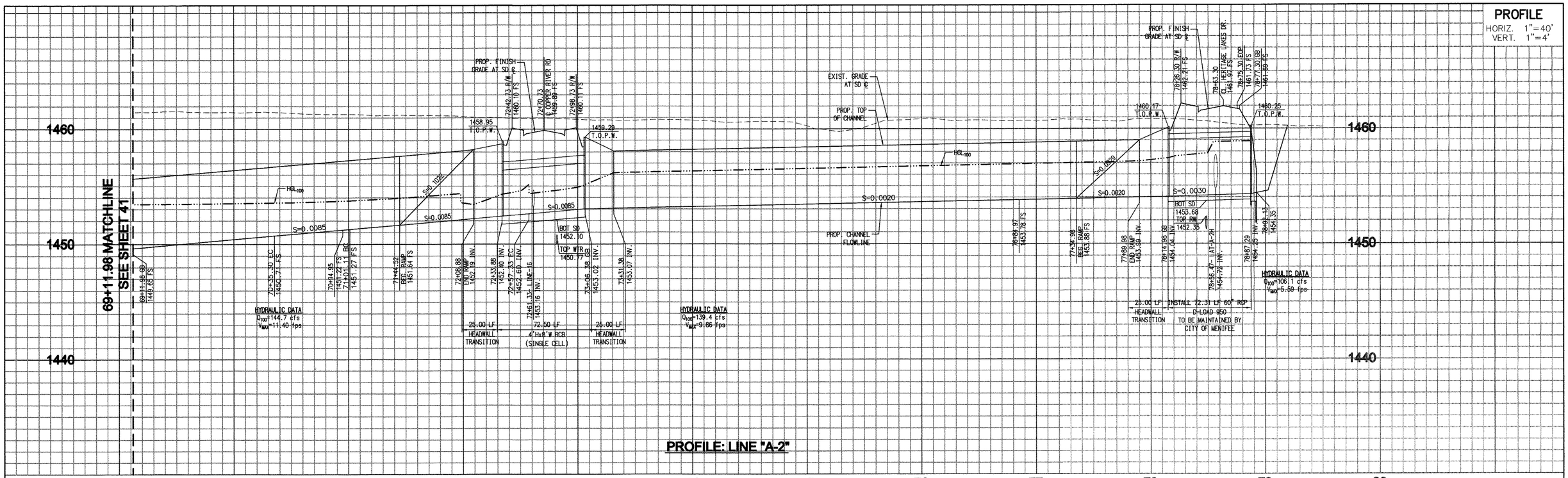
SHEET NO. 41 OF 51

PROJECT NO: IP19-006S

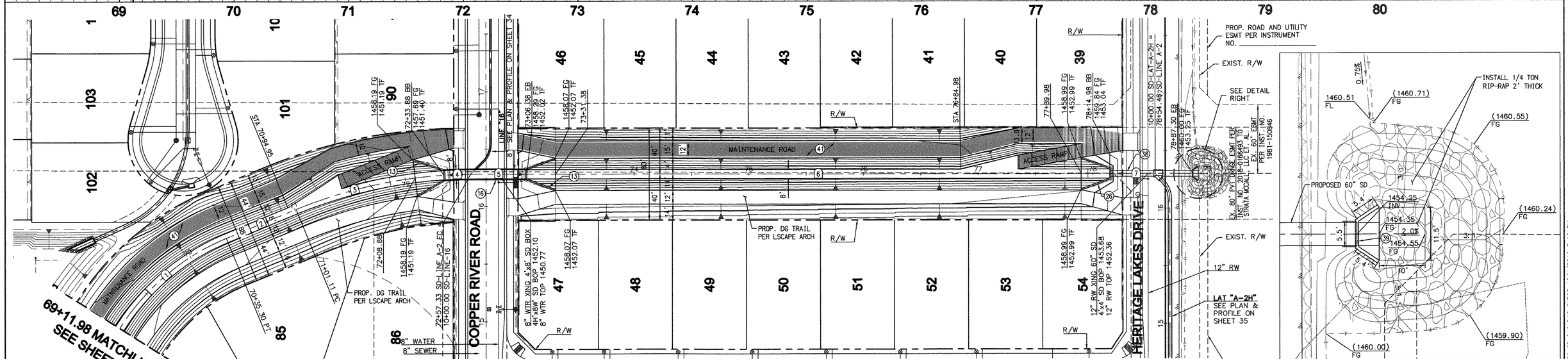
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PROFILE

HORIZ. 1"=40'
VERT. 1"=4'



PROFILE: LINE "A-2"



LINE/CURVE DATA TABLE					
NO	BEARING/DELTA	RADIUS	LENGTH	TANGENT	NOTE
1	35°19'48"	200.00'	123.32'	63.69'	CHANNEL-LINE "A-2"
2	N 22°13'58" W	---	65.80'	---	CHANNEL-LINE "A-2"
3	15°26'11"	400.00'	107.77'	54.21'	CHANNEL-LINE "A-2"
4	03°21'34"	400.00'	23.45'	11.73'	4'x8' RCB
5	N 05°08'40" E	---	49.05'	---	4'x8' RCB
6	N 00°08'40" E	---	458.60'	---	CHANNEL-LINE "A-2"
7	N 00°08'06" E	---	72.32'	---	60" RCP

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

SCALE 1"=40'

40 20 0 40 80 120

SCALE: 1"=40'

PLAN: LINE "A-2"

CONSTRUCTION NOTES

(13) CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86A, SEE DETAIL ON SHEET 47.
(16) CONSTRUCT SINGLE RCB 4'H x 8'W PRE-CAST REINFORCED CONCRETE BOX (RCB) PER CALTRANS STD. PLAN NO. D83A AND D83B.
(26) CONSTRUCT WARPED WINGWALL PER CALTRANS STD. D86B, SEE DETAIL ON SHEET 45.
(38) INSTALL 60" RCP (D-LOAD PER PLAN) PER BEDDING & TRENCH DETAIL ON SHEET 44.
(39) CONSTRUCT HEADWALL (WING AND U TYPE) PER DETAIL ON SHEET 47
(41) INSTALL 3" CLASS II AGGREGATE BASE OVER 90% COMPACTED NATIVE

10 5 0 10 20 30

SCALE: 1"=10'

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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
22995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
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CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.17 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

CHANNEL PLAN AND PROFILE

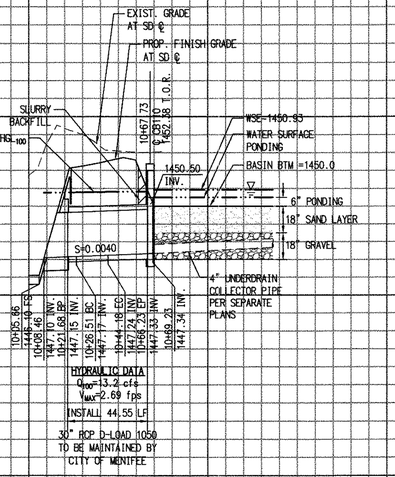
SHEET NO. 42 OF 51

PROJECT NO: IP19-006S

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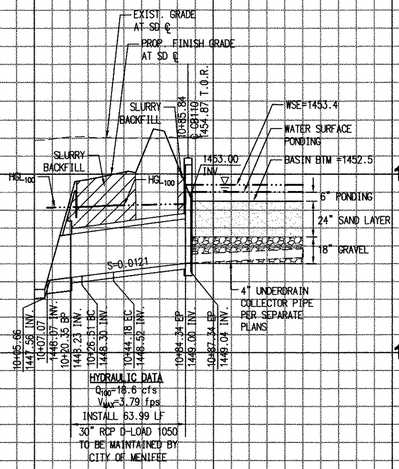
PROFILE

HORIZ. 1"=40'
VERT. 1"=4'



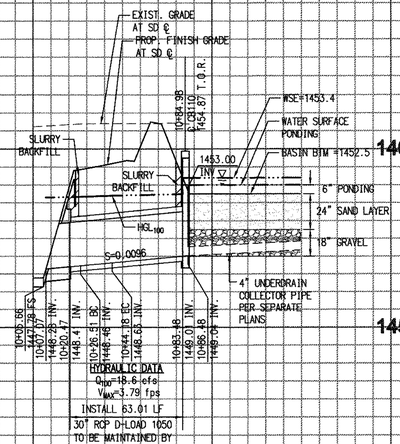
PROFILE: LAT "A-2B"

SEE PLAN ON SHEET 40



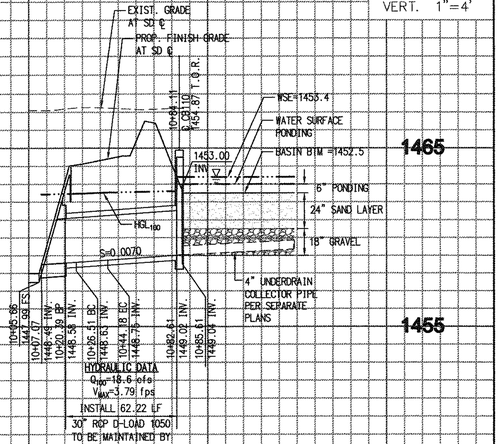
PROFILE: LAT "A-2C"

SEE PLAN ON SHEET 41



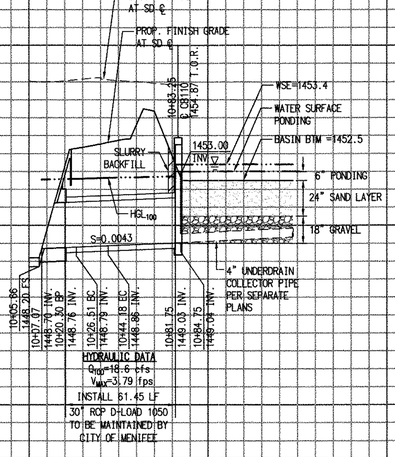
PROFILE: LAT "A-2D"

SEE PLAN ON SHEET 41



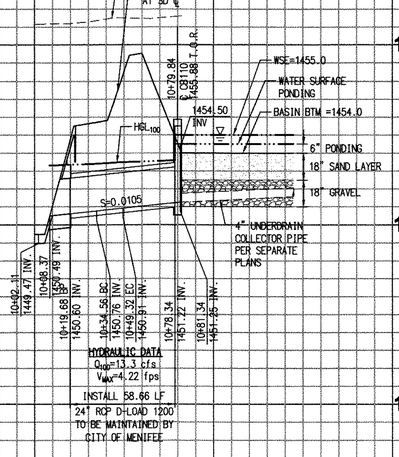
PROFILE: LAT "A-2E"

SEE PLAN ON SHEET 41



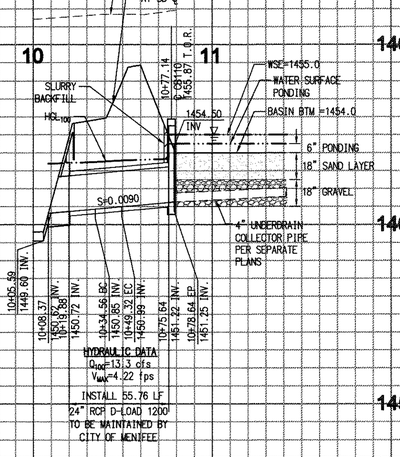
PROFILE: LAT "A-2F"

SEE PLAN ON SHEET 41



PROFILE: LAT "A-2G"

SEE PLAN ON SHEET 41



PROFILE: LAT "A-2G1"

SEE PLAN ON SHEET 41

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

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PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

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CITY OF MENIFEE
ENGINEERING DEPARTMENT

JONATHAN G. SMITH
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RCE 61253
EXP. 6/30/21
12-5-19
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DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

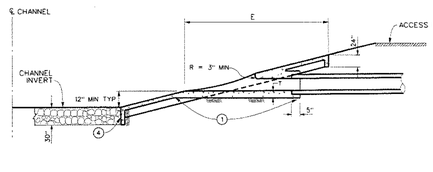
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

CHANNEL LATERAL PROFILE

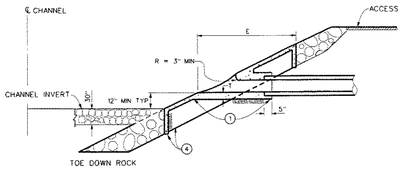
SHEET NO. 43 OF 51

PROJECT NO: IP19-006S

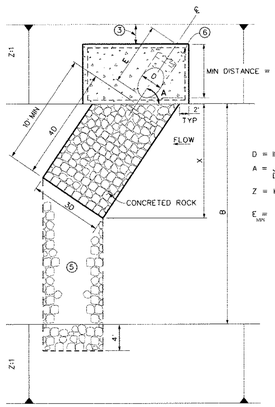
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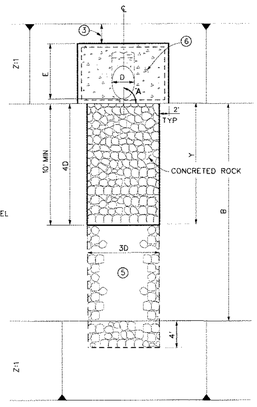
UNLINED CHANNEL CONDITION
NTS



ROCK LINED CHANNEL CONDITION
NTS



ROCK ENERGY DISSIPATOR
NTS



D = INSIDE PIPE DIAMETER (FT)

A = JUNCTION ANGLE TO BE DETERMINED BY ENGINEER

Z = HORIZONTAL COMPONENT OF SIDE SLOPE RATIO

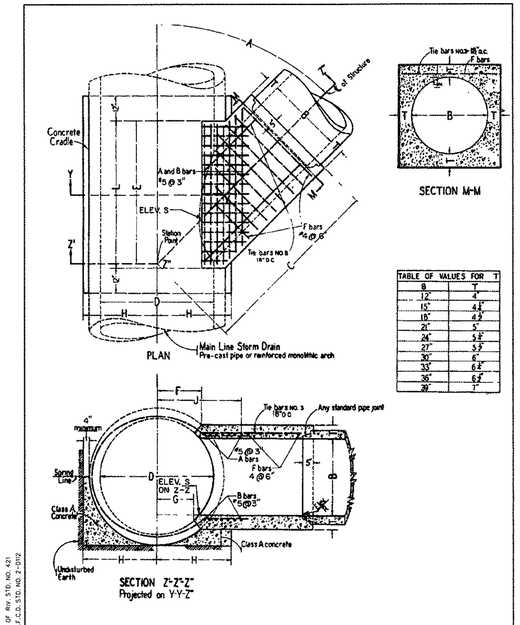
$E = \frac{Z(D+2')}{\sin A}$ NOT TO EXCEED TOP OF CHANNEL

NOTES:

1. JUNCTION STRUCTURE NO. 8 PER STD DWG JS231 OR JS232 AND MODIFIED AS SHOWN HEREON BY ADDING CUT-OFF WALLS AROUND THE ENTIRE PERIMETER OF THE SIDE SLOPE CONCRETE. ALL REQUIRED VALUES FOR DATA "D, L, C, ELEV "F", ELEV "S", ANGLE "A", STA "X") SHALL BE SHOWN ON THE PLAN AND PROFILE.
2. ROCK ENERGY DISSIPATOR SHALL BE 30 INCH THICK, 1/4 TON CONCRETED (GROUTED) ROCK PER SECTION 72 OF THE STATE STANDARD SPECIFICATIONS, EXCEPT THAT TOTAL PENETRATION OF THE ROCK BY THE CONCRETE IS REQUIRED AND THE ROCK SURFACE SHALL PROJECT 9 TO 12 INCHES FROM THE CONCRETE SURFACE. NO ROCK ENERGY DISSIPATOR REQUIRED WHEN LATERAL Q ≤ 10 CFS.
3. MAY EXTEND CONCRETE TO TOP OF SLOPE FOR ROCK LINED CHANNEL.
4. CUT-OFF WALL DEPTH TO MATCH ADJACENT ROCK THICKNESS + 24 INCH MIN.
5. FOR UNLINED CHANNELS, IF "X" OR "Y" IS GREATER THAN OR EQUAL TO B/2, EXTEND CONCRETED ROCK ACROSS ENTIRE BASE WIDTH OF CHANNEL AND 4-FEET UP THE OPPOSITE SLOPE, OR AS APPROVED BY THE ENGINEER.
6. SLOPE PAVING AND CUT-OFF WALL STRUCTURAL CONCRETE PER STD DWG CH326.

ROCK ENERGY DISSIPATOR (RIGHT ANGLE JUNCTION) (14)
NTS

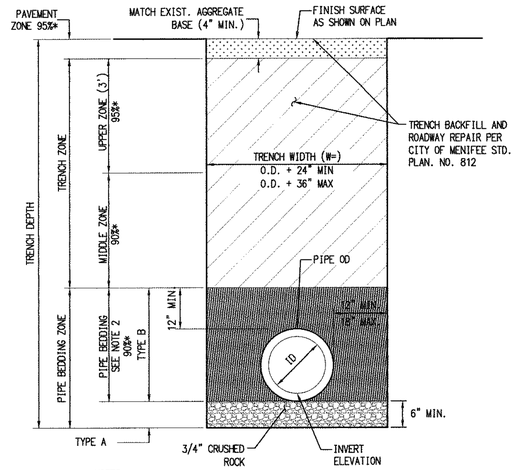
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		JUNCTION STRUCTURE NO. 8 (SOFT-BOTTOM CHANNEL)
RECOMMENDED FOR APPROVAL BY: CHIEF, DESIGN & CONSTRUCTION — DATE: OCTOBER 2002 — R.C.E. No. 44084	APPROVED BY: CHIEF ENGINEER — DATE: OCTOBER 2002 — R.C.E. NO. 33336	STANDARD DRAWING NUMBER JS233



CITY OF RIV. STD. NO. 421
L.A.C.F.C.D. STD. NO. 2-3102

5

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		JUNCTION STRUCTURE NO. 2
APPROVED BY: CHIEF ENGINEER — DATE: Nov. 5, 2004 — R.C.E. NO. 33336		STANDARD DRAWING NUMBER JS227 SHEET 1 OF 2

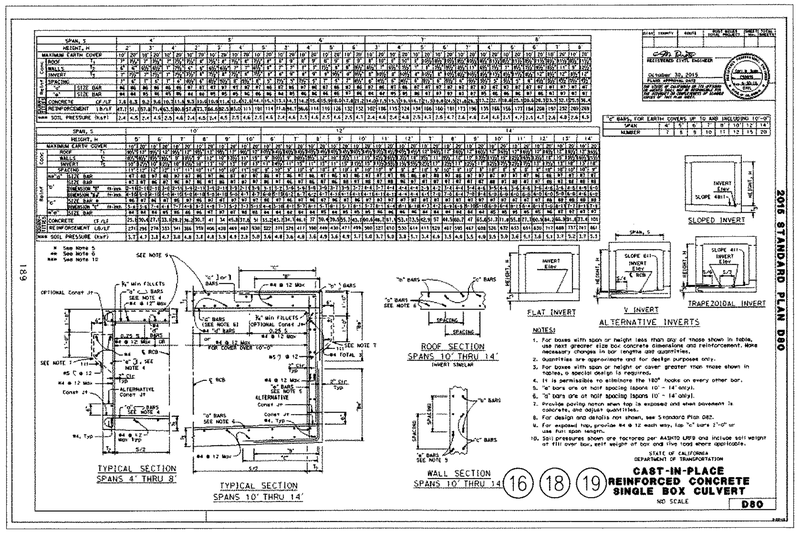


NOTES:

1. (*) INDICATES MINIMUM RELATIVE COMPACTION.
2. STORM DRAIN TRENCH BACKFILL SHALL CONFORM TO THE MATERIALS SPECIFIED IN CITY OF MENIFEE STD. PLAN NO. 812.
3. BEDDING TYPE B MATERIAL SHALL BE SAND WITH A SAND EQUIVALENT VALUE OF NO LESS THAN 30. BEDDING, TYPE A, SHALL BE CRUSHED AGGREGATE GRANULAR MATERIAL, 100% SHALL PASS NO.4 SIEVE.
4. STORM DRAIN PIPE BEDDING SHALL CONFORM TO SECTION 217 OF THE STANDARD SPECIFICATION OF PUBLIC WORKS CONSTRUCTION LATEST EDITION.

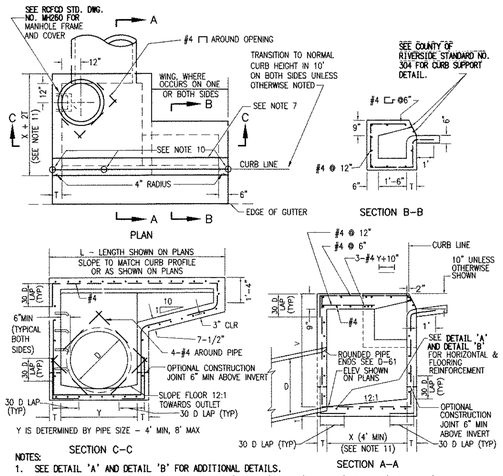
STORM DRAIN PIPE BEDDING AND TRENCH BACKFILL DETAIL

N.T.S.



(16) (18) (19)

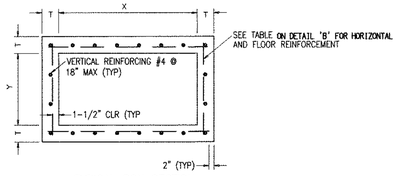
NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.



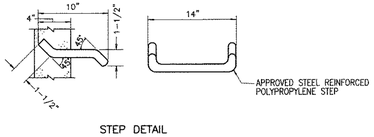
NOTES:

1. SEE DETAIL 'A' AND DETAIL 'B' FOR ADDITIONAL DETAILS.
2. TYPE ARE DESIGNATED ON PLANS AS FOLLOWS: B(NO WING), B-1 (ONE WING) OR B-2 (TWO WINGS).
3. MAINTAIN 1-1/2" CLEAR SPACING BETWEEN REINFORCING AND CONCRETE SURFACE UNLESS OTHERWISE NOTED.
4. STEPS SHALL BE INSTALLED WHEN V EXCEEDS 4', SEE DETAIL 'A'
5. CONCRETE GUTTER TO MATCH ADJACENT GUTTERS.
6. AND EXPANSION JOINT SHALL BE PLACED AT THE ENDS OF THE INLET WHERE THE CURB IS TO ADJOIN.
7. PROVIDE ½" TOOLED GROOVE IN TOP SLAB IN LINE WITH BACK OF ADJACENT CURB.
8. SURFACE OF TOP SLAB TO MATCH SIDEWALK FINISH AND SLOPE.
9. IF REQUIRED BY LOCAL AGENCY, EXTEND TOP SLAB STEEL REINFORCEMENT 12" INTO ADJACENT SIDEWALK.
10. ELEVATIONS SHALL BE SHOWN ON PLANS WHERE INDICATED BY "O" SYMBOL.
IF REQUIRED BY LOCAL AGENCY, ENLARGE CURB INLET TOP WIDTH OF ADJACENT SIDEWALK (X + T, NOT TO EXCEED 5'-6") BY LENGTH OF INLET INCLUDING WINGES(S). REINFORCING STEEL SHALL BE EXTENDED ACROSS ENLARGED TOP TO CLEAR DISTANCES SHOWN.

(27) CATCH BASIN
NOT TO SCALE



TYPICAL BOX SECTION



STEP DETAIL

NOTES

1. CONCRETE SHALL BE 560-C-3250 UNLESS OTHERWISE NOTED.
2. REINFORCING STEEL SHALL COMPLY WITH THIS DRAWING UNLESS OTHERWISE SPECIFIED.
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS CONFORMING TO LATEST ASTM SPECIFICATIONS.
4. BENDS SHALL BE IN ACCORDANCE WITH LATEST ACI CODE.
5. MINIMUM SPLICE LENGTH FOR REINFORCING SHALL BE 30 DIAMETERS.
6. FLOOR SHALL HAVE A WOOD TROWEL FINISH AND, EXCEPT WHERE USED AS JUNCTION BOXES, SHALL HAVE A MINIMUM SLOPE OF 1:12 TOWARD THE OUTLET.
7. DEPTH V IS MEASURED FROM THE TOP OF THE STRUCTURE TO THE FLOWLINE OF THE BOX.
8. WALL THICKNESS AND REINFORCING STEEL REQUIRED MAY BE DECREASED IN ACCORDANCE WITH TABLE ON DETAIL 'B'
9. WALL THICKNESS SHALL BE STEPPED ON THE OUTSIDE OF THE BOX.
10. WHEN THE STRUCTURE DEPTH V EXCEEDS 4', STEPS SHALL BE CAST INTO THE WALL AT 15" INTERVALS FROM 15" ABOVE FLOOR TO WITHIN 12" OF TOP OF STRUCTURE. WHERE POSSIBLE, PLACE STEPS IN WALL WITHOUT PIPE OPENING, OTHERWISE OVER OPENING OF SMALLEST DIAMETER.
11. ALTERNATE STEP MAY BE AN APPROVED STEEL REINFORCED POLYPROPYLENE STEP.
12. UPON APPROVAL OF THE AGENCY, THE USE OF PRECAST STORM STRUCTURES IS ACCEPTABLE AS AN ALTERNATE TO CAST-IN-PLACE. PRECAST UNITS SHALL CONFORM TO ASTM STANDARDS AND BE MANUFACTURED IN A PERMANENT FACILITY DESIGNED FOR THAT PURPOSE.

DETAIL 'A'

BOX SECTION REINFORCEMENT (HORIZONTAL AND FLOOR)			
MAXIMUM SPAN X OR Y	DEPTH V	THICKNESS T	HORIZONTAL AND FLOOR REINFORCEMENT SIZE AND SPACING
3' TO 4'	4'	6"	#4 @ 18"
			#4 @ 12"
4'-1" TO 7'			#4 @ 8"
7'-1" TO 8'			
3' TO 4'	4'-1" TO 8'	6"	#4 @ 18"
4'-1" TO 5'			#4 @ 12"
5'-1" TO 6'			#4 @ 8"
6'-1" TO 8'			#4 @ 6"
3' TO 4'	8'-1" TO 12'	6"	#4 @ 15"
4'-1" TO 5'		8"	#4 @ 12"
5'-1" TO 6'			#4 @ 8"
6'-1" TO 8'			#4 @ 6"
3' TO 4'	12'-1" TO 16'	8"	#4 @ 12"
4'-1" TO 5'			#4 @ 12"
5'-1" TO 6'			#4 @ 8"
6'-1" TO 7'			#4 @ 6"
7'-1" TO 8'			#5 @ 8"
3' TO 4'	16'-1" TO 20'	8"	#4 @ 12"
4'-1" TO 5'		10"	#4 @ 12"
5'-1" TO 6'			#4 @ 8"
6'-1" TO 7'			#4 @ 6"
7'-1" TO 8'			#5 @ 8"
3' TO 4'	20'-1" TO 24'	8"	#4 @ 12"
4'-1" TO 5'		10"	#4 @ 12"
5'-1" TO 6'			#4 @ 8"
6'-1" TO 7'			#4 @ 6"
7'-1" TO 8'		12"	#5 @ 8"

DETAIL 'B'

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY: FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER — FRANCISCO MARTINEZ JR. — C-84640 — CIVIL — STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH — RCE 61253 — EXP. 6/30/21
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

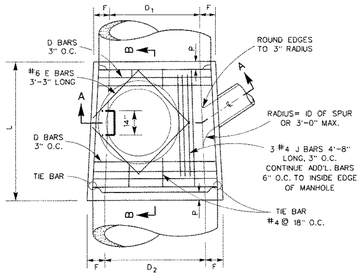
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

DETAIL SHEET

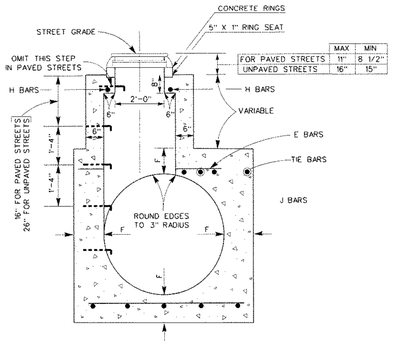
SHEET NO. 44 OF 51

PROJECT NO: IP19-006S

H:\PDATA\18-009 MCCALL MESA\DWGS\IMPS\STREETS\18-009-SD-044.DWG CHRIS 12/4/2019 3:19 PM

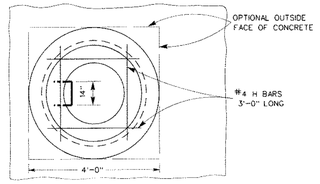


PLAN
(SHAFT NOT SHOWN)

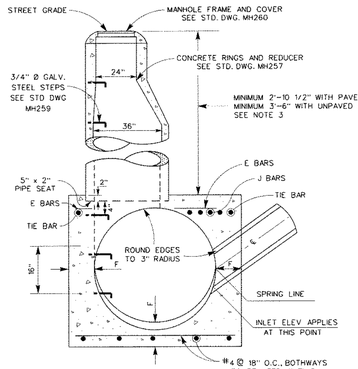


	MAX	MIN
FOR PAVED STREETS	11"	8 1/2"
UNPAVED STREETS	16"	15"

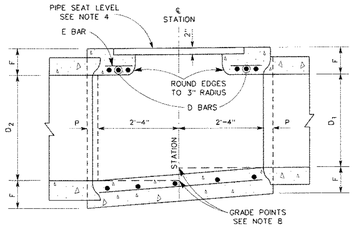
DETAIL M
(SEE NOTE 3)



PLAN



SECTION A–A



SECTION B–B

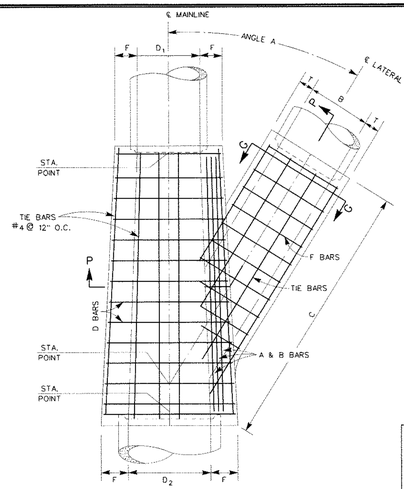
TABLE OF VALUES FOR "F"			
× D_2, D_1	F	× D_2, D_1	F
36"	6 1/2"	78"	11 3/4"
39"	7"	84"	12 1/2"
42"	7 1/2"	90"	13 1/4
45"	7 3/4"	96"	14"
48"	8"	102"	15 1/2"
51"	8 1/2"	108"	15"
54"	9"	114"	16 1/2"
57"	9 1/4"	120"	17"
60"	9 1/2"	126"	17"
63"	10"	132"	17 1/2"
66"	10 1/4"	138"	17 1/2"
69"	10 3/4"	144"	18"
72"	11"		

× USE D_2, OR D_1 WHICHEVER IS GREATER

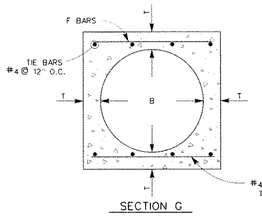
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		
RECOMMENDED FOR APPROVAL BY: CHIEF, DESIGN & CONSTRUCTION	APPROVED BY: CHIEF ENGINEER	
DATE: JANUARY, 2011 R.E. No. 44684	DATE: JANUARY, 2011 R.C.E. NO. 32336	

25

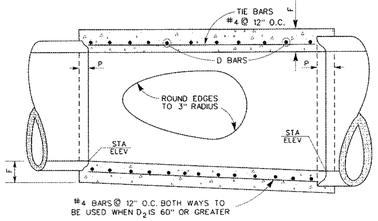
8 MANHOLE NO. 2
STANDARD DRAWING NUMBER MH252
SHEET 1 OF 2



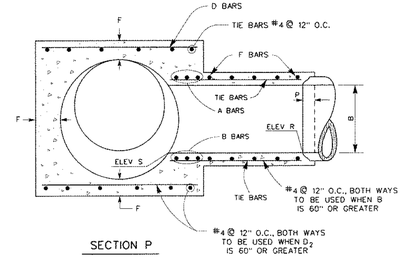
PLAN



SECTION G



LONGITUDINAL SECTION



SECTION P

TABLE

×D2, D1, OR B	F OR T	A OR B BARS	D OR F BARS	P
12	4	#5 @ 3" O.C.	#4 @ 6" O.C.	5"
18	4 1/2			
24	5 1/4			
30	6			
36	6 1/2			
42	7 1/2	#6 @ 3" O.C.	#5 @ 6" O.C.	
48	8			
54	9			
60	9 1/2	#6 @ 3" O.C.	#6 @ 6" O.C.	8"
66	10 1/4			
72	11			
84	12 1/2			
90	13 1/4			
96	14			
102	15 1/2			
108	16			
114	16 1/2			
120	17			
126	17			
132	17 1/2			
138	17 1/2			
144	18			

× USE D_2, OR D_1, WHICHEVER IS GREATER, OR B

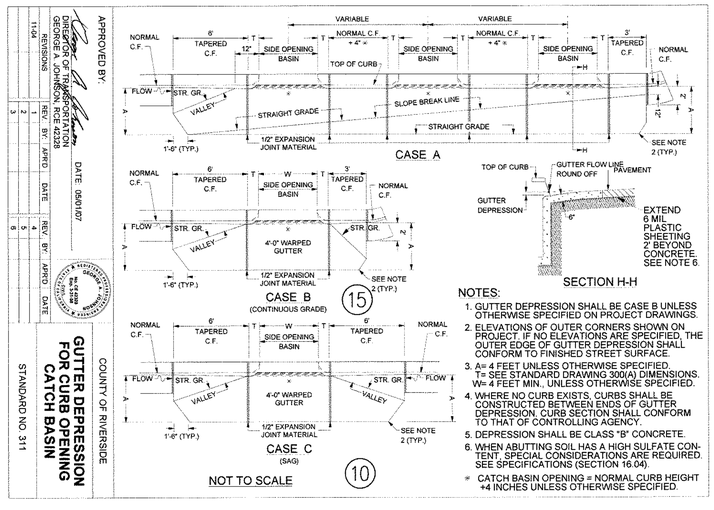
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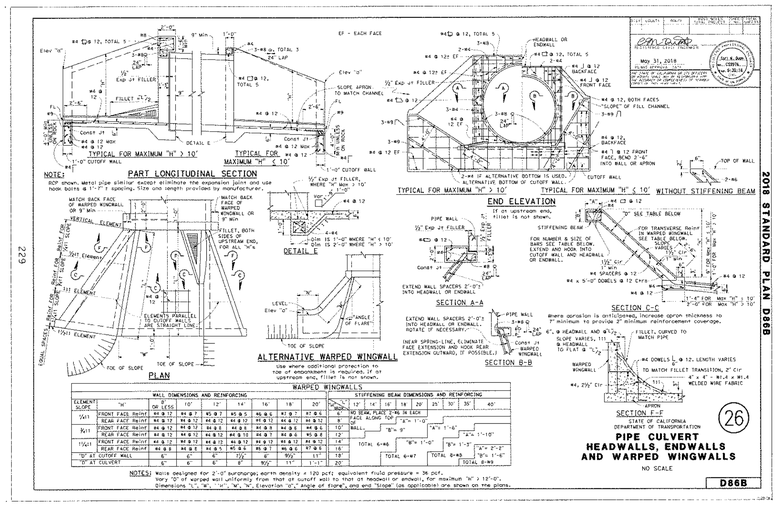
1. NUMBER OF A&B BARS SHOWN IS REPRESENTATIONAL. SEE TABLE FOR SPACING & BAR COUNT.
2. VALUES FOR A, B, C, D1, D2, ELEV. R AND ELEV. S ARE SHOWN ON IMPROVEMENT PLAN. LENGTH OF THE STRUCTURE MAY BE INCREASED TO MEET PIPE ENDS USING D BARS IN EXTENDED PORTION OF SAME DIMENSION AND SPACING AS SPECIFIED.
3. CONCRETE SHALL BE CLASS "A". FLOOR OF THE STRUCTURE SHALL BE STEEL-TROWELED TO SPRING LINE. STRUCTURE SHALL BE POURED IN ONE CONTINUOUS OPERATION, EXCEPT THAT THE CONTRACTOR SHALL HAVE THE OPTION OF PLACING AT THE SPRING LINE A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY.
4. REINFORCING STEEL CLEAR COVER SHALL BE ½" ON INSIDE. TIE BARS SHALL BE NO.4 AND SPACED 12" C/C.
5. WHEN DIMENSION "C" IS NOT SPECIFIED THE SPUR SHALL NOT BE CONSTRUCTED AND A & B BARS SHALL BE OMITTED.
6. THE MAXIMUM COVER ABOVE THIS STRUCTURE SHALL BE 25'. IF THE COVER EXCEEDS 25', A SPECIAL STRUCTURE SHALL BE DESIGNED FOR THE COVER AND DETAILED ON THE PROJECT DRAWINGS.

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		
RECOMMENDED FOR APPROVAL BY: CHIEF, DESIGN & CONSTRUCTION	APPROVED BY: CHIEF ENGINEER	
DATE: JANUARY, 2011 R.E. No. 44684	DATE: JANUARY, 2011 R.C.E. NO. 32336	

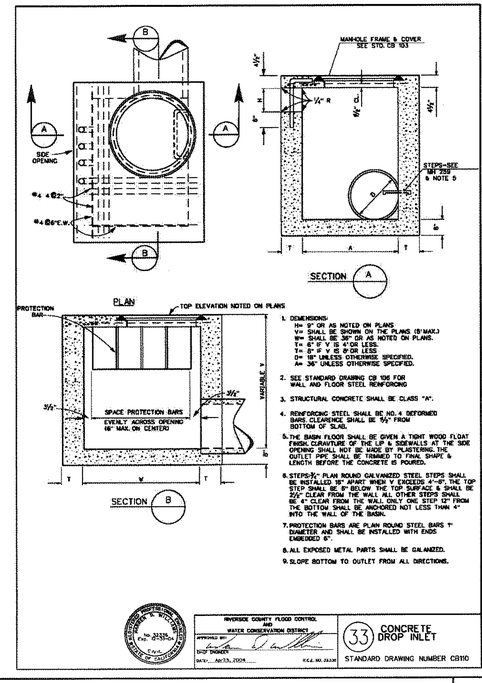
24

TRANSITION STRUCTURE NO. 3
STANDARD DRAWING NUMBER TS303





SD LINE A–2 CHANNEL WING WALL STRUCTURES							
HEADWALL STATION	W (FT)	L_1 (FT)	L_2 (FT)	ELEV. "A" (FT)	H (FT)	$\angle A_1$ (°)	$\angle A_2$ (°)
78+14.98	14.00	26.59	26.59	1458.99	4.58	19.94	19.94



RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY: CHIEF ENGINEER	
DATE: Jan 23, 2006 R.C.E. NO. 32336	

33 CONCRETE DROP INLET
STANDARD DRAWING NUMBER CB110

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS				
SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER FRANCISCO MARTINEZ JR. C-84640 CIVIL STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT

JONATHAN G. SMITH, RCE 61253, EXP. 6/30/21
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — 12.5.19 DATE

RECOMMENDED BY: — 12/5/19 DATE

CITY OF MENIFEE

CITY OF MENIFEE ENGINEERING DEPARTMENT

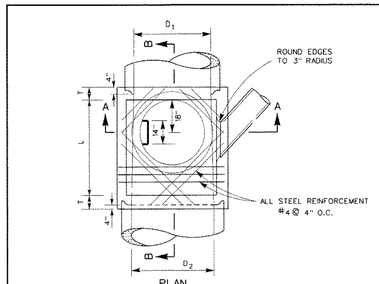
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

DETAIL SHEET

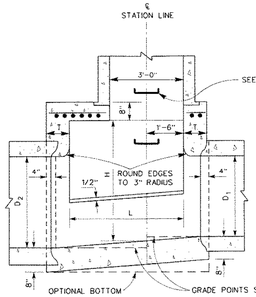
SHEET NO. 45 OF 51

PROJECT NO: IP19-006S

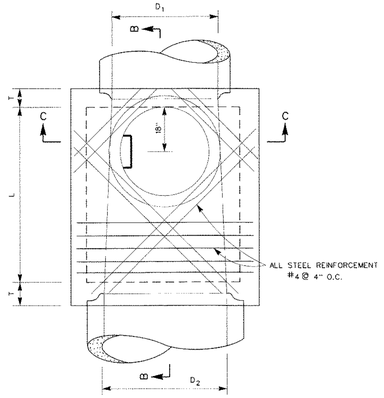
H:\FDATA\18-009 MCCALL MESA\DWGS\IMP\STREETS\18-009-SD-045.DWG CHRIS 12/4/2019 3:20 PM



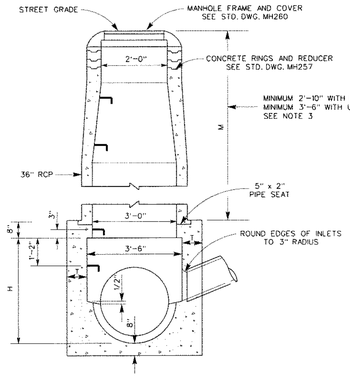
PLAN
(SHAFT NOT SHOWN)



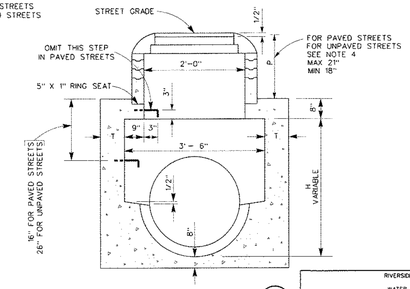
SECTION B-B



DETAIL N PLAN
(SHAFT NOT SHOWN, SEE NOTE 3)



SECTION A-A

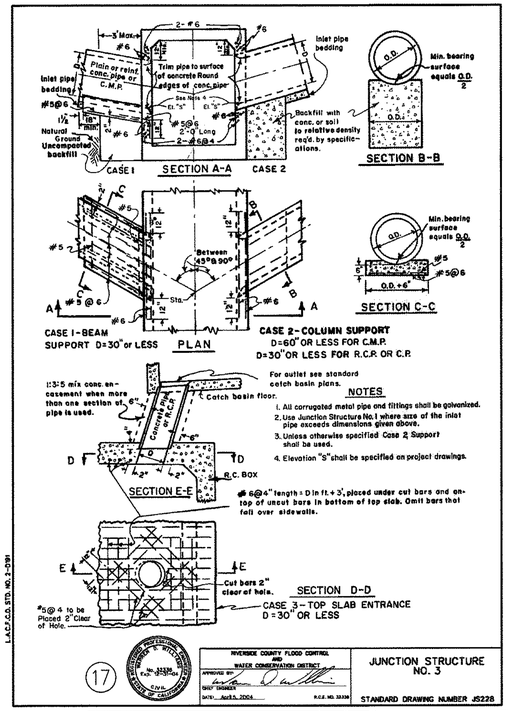


SECTION C-C

(7)

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
RECOMMENDED FOR APPROVAL BY: CHIEF, DESIGN & CONSTRUCTION	APPROVED BY: CHIEF ENGINEER
DATE: JANUARY, 2011 — R.E. No. 44884	DATE: JANUARY 2011 — R.C.E. NO. 33336

MANHOLE NO. 1
STANDARD DRAWING NUMBER MH251
SHEET 1 OF 2



NOTES

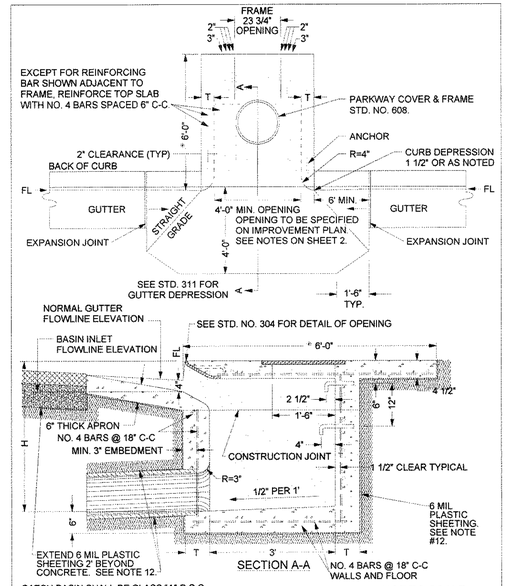
1. All corrugated metal pipe and fittings shall be galvanized.
2. Use Junction Structure No. 1 where size of the inlet pipe exceeds dimensions given above.
3. Unless otherwise specified Case 2 Support shall be used.
4. Elevation "S" shall be specified on project drawings.

(17)

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY: DIRECTOR	DATE: April 5, 2004 — R.C.E. NO. 33336

JUNCTION STRUCTURE NO. 3
STANDARD DRAWING NUMBER JS228

LA.C.F.C.D. STD. NO. J-2191



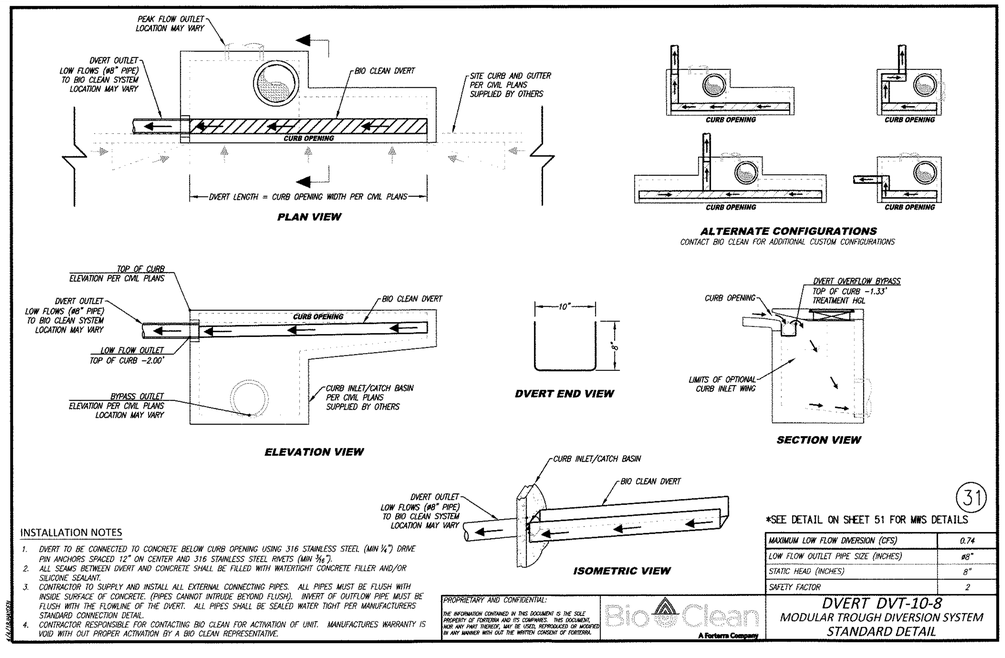
CATCH BASIN SHALL BE CLASS "A" P.C.C.
*TOP OF CATCH BASIN TO BE POURED MONOLITHIC WITH SIDEWALK, 6 FT.

NOT TO SCALE

APPROVED BY:	DATE: 05/01/07	COUNTY OF RIVERSIDE
DIRECTOR OF TRANSPORTATION GEORGE A. JOHNSON, RCE 42328		(9) CURB INLET CATCH BASIN

REVISIONS	REV BY	APR'D	DATE	REV BY	APR'D	DATE
8-71, 9-88	1			4		
4-90, 11-04	2			5		
	3			6		

STANDARD NO. 300 (1 OF 2)



INSTALLATION NOTES

1. DVERT TO BE CONNECTED TO CONCRETE BELOW CURB OPENING USING 316 STAINLESS STEEL (MIN ¼") DRIVE PIN ANCHORS SPACED 12" ON CENTER AND 316 STAINLESS STEEL RIVETS (MIN 3/16").
2. ALL SEAMS BETWEEN DVERT AND CONCRETE SHALL BE FILLED WITH WATERTIGHT CONCRETE FILLER AND/OR SILICONE SEALANT.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH THE FLOWLINE OF THE DVERT. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURES WARRANTY IS VOID WITH OUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

*SEE DETAIL ON SHEET 51 FOR MWS DETAILS

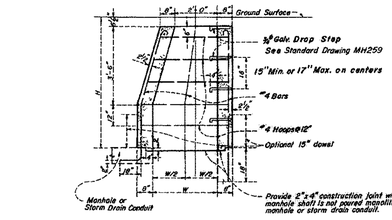
MAXIMUM LOW FLOW DIVERSION (CFS)	0.74
LOW FLOW OUTLET PIPE SIZE (INCHES)	#8"
STATIC HEAD (INCHES)	8"
SAFETY FACTOR	2

(31)

PROPRIETARY AND CONFIDENTIAL:
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Bio Clean — A Forterra Company

DVERT DVT-10-8
MODULAR TROUGH DIVERSION SYSTEM
STANDARD DETAIL



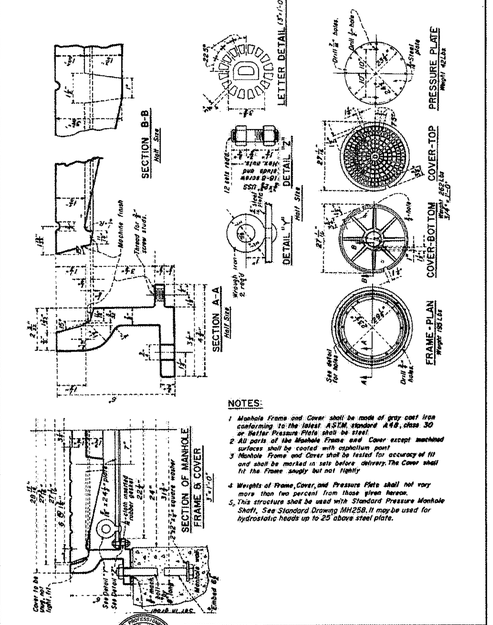
NOTES:

1. If "H" is less than 7'-0", W=2'-0"
   If "H" is between 7'-0" and 21'-0", W= 2'-6"
   If "H" is 21'-0" or more, W= 3'-0"
   If "H" is more than 8'-10½", bring walls vertically to 4'-0½" below surface and taper from 3'-0" to 2'-0" as shown.
2. This structure shall be used with Standard Pressure Manhole Frame and Cover, See Standard Drawing MH 256. It may be used for hydrostatic heads up to 25' above the steel plate.
3. Concrete shall be Class "A"

(25)

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY: CHIEF ENGINEER	DATE: April 5, 2004 — R.C.E. NO. 33336

STANDARD PRESSURE MANHOLE SHAFT
STANDARD DRAWING NUMBER MH258



(25)

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
APPROVED BY: CHIEF ENGINEER	DATE: April 5, 2004 — R.C.E. NO. 33336

MANHOLE FRAME & COVER PRESSURE TYPE
STANDARD DRAWING NUMBER MH256

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
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REVISIONS

SHT.	DESCRIPTION	DATE	BY	APR'D

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER — FRANCISCO MARTINEZ — C-84640 — CIVIL — STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH — RCE 61253 — EXP. 6/30/21
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER — DATE 12/5/19
RECOMMENDED BY: — DATE 12/5/19

CITY OF MENIFEE
ENGINEERING DEPARTMENT

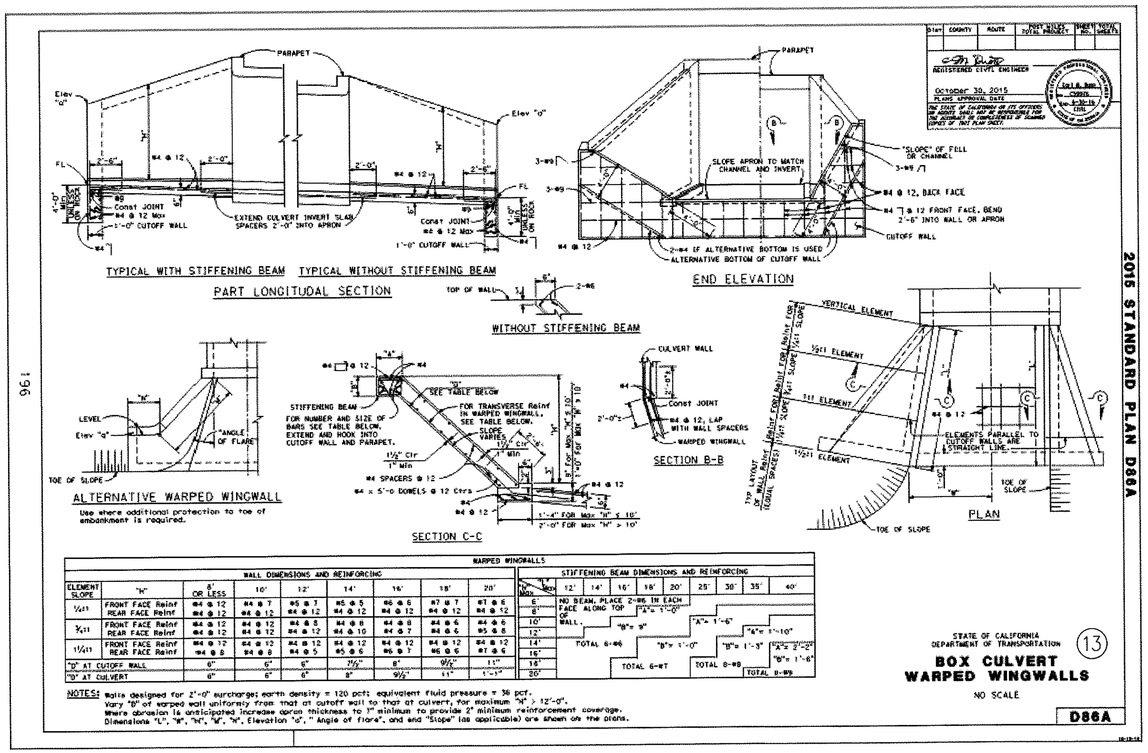
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

DETAIL SHEET

SHEET NO. 46 OF 51

PROJECT NO: IP19-006S

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WARPED WINGWALLS

ELEMENT SLOPE	"H"	WALL DIMENSIONS AND REINFORCING 8' OR LESS	10'	12'	14'	16'	18'	20'
½:1	FRONT FACE Reinf	#4 @ 12	#4 @ 7	#5 @ 5	#5 @ 5	#6 @ 6	#7 @ 7	#7 @ 6
	REAR FACE Reinf	#4 @ 12	#6 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
¾:1	FRONT FACE Reinf	#4 @ 12	#4 @ 12	#5 @ 5	#4 @ 8	#4 @ 8	#4 @ 6	#4 @ 6
	REAR FACE Reinf	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 10	#4 @ 7	#4 @ 6	#5 @ 6
1¼:1	FRONT FACE Reinf	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12	#4 @ 12
	REAR FACE Reinf	#4 @ 8	#4 @ 8	#4 @ 5	#5 @ 6	#5 @ 7	#6 @ 6	#7 @ 6
"D" AT CUTOFF WALL		6"	6"	8"	7½"	8"	9½"	11"
"D" AT CULVERT		6"	6"	6"	8"	9½"	11"	1'-1"

STIFFENING BEAM DIMENSIONS AND REINFORCING

"H" Min.	"H" Max.	12'	14'	16'	18'	20'	25'	30'	35'	40'
6'	8'	NO BEAM, PLACE Z=8% IN EACH FACE ALONG TOP OF WALL					"A"= 1'-0"			
8'	10'						"B"= 9"		"A"= 1'-6"	
10'	12'									"A"= 2'-0" "B"= 1'-3" "C"= 1'-6"
12'	14'	TOTAL 6-#6					"B"= 1'-0"		"B"= 1'-3"	
14'	16'									
16'	18'	TOTAL 6-#7					TOTAL 8-#8		TOTAL 8-#9	
18'	20'									

NOTES: Walls designed for 2'-0" surcharge; earth density = 120 pcf; equivalent fluid pressure = 36 pcf.
Vary "D" of warped wall uniformly from that at cutoff wall to that at culvert, for maximum "H" > 12'-0".
Where abrasion is anticipated increase apron thickness to 1" minimum to provide 2" minimum reinforcement coverage.
Dimensions "L", "B", "H", "W", "N", Elevation "o", " Angle of flare", and end "Slope" (as applicable) are shown on the plans.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

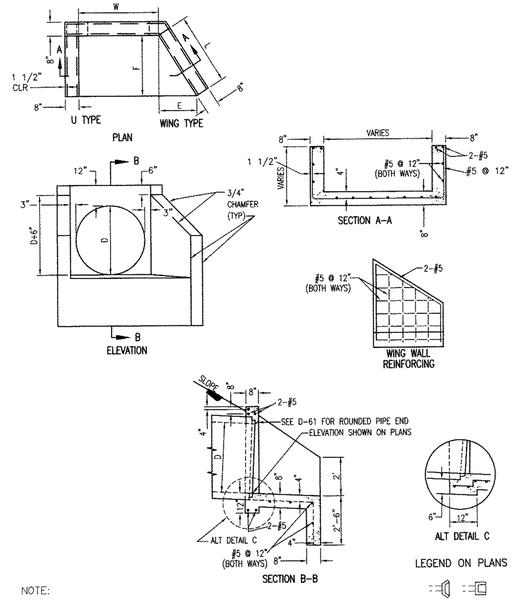
BOX CULVERT WARPED WINGWALLS (13)

NO SCALE

D86A

2015 STANDARD PLAN D86A

96 i



NOTE:

SEE TABLE TO HEREON FOR DIMENSION TABLE AND GENERAL NOTES.

TABLE OF DIMENSIONS AND QUANTITIES
FOR HEADWALLS SHOWN ON D-35A HEREON

NOTE: DIMENSIONS E AND L APPLY TO WING TYPE ONLY.

ϕ OF PIPE	DIMENSIONS L	E	F	W	SINGLE PIPE U TYPE CONC. (CY)	U TYPE STEEL (LBS)	WING TYPE CONC. (CY)	WING TYPE STEEL (LBS)	W	DOUBLE PIPE U TYPE CONC. (CY)	U TYPE STEEL (LBS)	WING TYPE CONC. (CY)	WING TYPE STEEL (LBS)
42"	3'-7 1/4"	2'	3'	4'	1.57	117	1.90	135	10'	2.69	190	3.16	214
48"	4'-6"	2'-6"	3'-9"	4'-6"	1.97	153	2.48	184	11'-4"	3.43	252	4.06	288
54"	5'-4 7/8"	3'	4'-6"	5'	2.41	190	3.07	245	12'-8"	4.24	319	5.06	368
60"	6'-3 3/4"	3'-6"	5'-3"	5'-6"	2.88	239	3.75	294	14'	5.13	386	6.17	442
66"	7'-2 1/2"	4'	6'	6'	3.38	294	4.52	356	15'-4"	6.08	454	7.20	516
72"	8'-1 3/8"	4'-6"	6'-9"	6'-6"	3.93	368	5.52	417	16'-8"	7.11	522	8.30	588
78"	9'	5'	7'-6"	7'	4.50	444	6.70	503	18'	8.20	595	9.50	693
84"	9'-10 3/4"	5'-6"	8'-3"	7'-6"	5.21	540	8.15	619	19'-4"	9.50	687	10.80	786

NOTES

1. SKEWED PIPES: DIMENSION W TO BE INCREASED TO TAKE CARE OF INCREASED WIDTH OR LENGTH DUE TO SKEWOF MULTIPLE PIPES.
2. TOP OF HEADWALL SHALL BE PLACED APPROXIMATELY PARALLEL TO PROFILE GRADE WHEN THE GRADE IS 3% OR MORE.
3. CONCRETE SHALL BE 560-C-3250.
4. EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
5. MULTIPLE PIPES SHALL BE SET A DISTANCE OF D/2, WITH A 1' MINIMUM, BETWEEN OUTSIDE DIAMETERS OF PIPES.
6. USE ALTERNATE DETAIL C FOR PIPE WALL THICKNESS GREATER THAN 3".

LEGEND ON PLANS

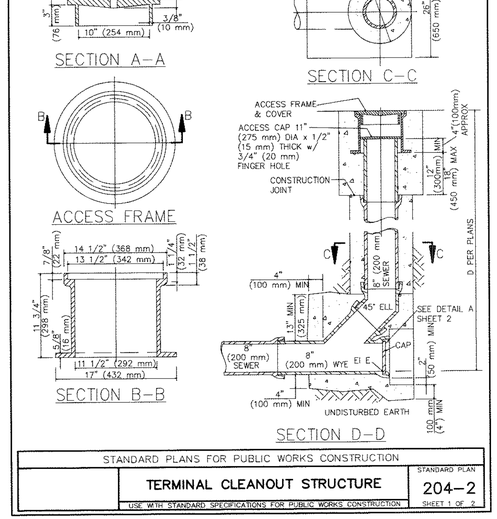
(39) HEADWALL (WING AND U TYPE) FOR PIPES 42" TO 84"

NOT TO SCALE

SD LINE A-2 CHANNEL WING WALL STRUCTURES

HEADWALL STATION	W (FT)	L_1 (FT)	L_2 (FT)	ELEV. "A" (FT)	H (FT)	$\angle A_1$ (°)	$\angle A_2$ (°)
51+34.10	16.00	32.03	31.24	1452.04	7.99	20.98	16.52
57+17.43	16.00	27.35	27.35	1453.07	6.38	23.94	23.94
57+99.43	16.00	27.35	27.35	1453.42	6.49	23.94	23.94
63+71.78	16.00	27.35	27.35	1454.44	6.38	23.94	23.94
64+52.78	16.00	27.35	27.35	1454.79	6.46	23.94	23.94
72+33.88	16.00	26.80	27.89	1458.19	6.22	26.24	21.65
73+06.38	14.00	26.59	26.59	1458.07	5.42	19.94	19.94

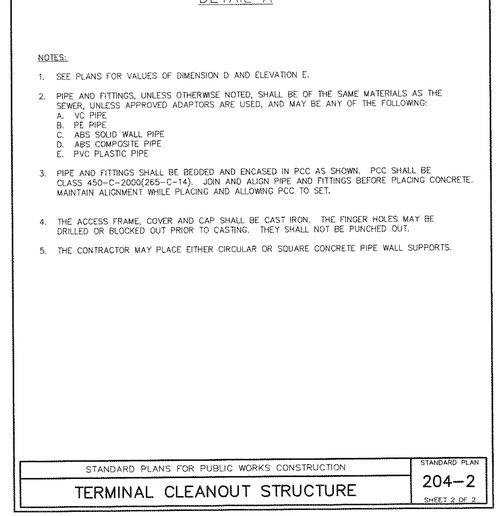
(13) BOX CULVERT WARPED WINGWALLS WITH TABLE



STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

TERMINAL CLEANOUT STRUCTURE — STANDARD PLAN 204-2

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION — SHEET 1 OF 2



NOTES:

1. SEE PLANS FOR VALUES OF DIMENSION D AND ELEVATION E.
2. PIPE AND FITTINGS, UNLESS OTHERWISE NOTED, SHALL BE OF THE SAME MATERIALS AS THE SEWER, UNLESS APPROVED ADAPTORS ARE USED, AND MAY BE ANY OF THE FOLLOWING:
   A. VC PIPE
   B. PE PIPE
   C. ABS SOLID WALL PIPE
   D. ABS COMPOSITE PIPE
   E. PVC PLASTIC PIPE
3. PIPE AND FITTINGS SHALL BE BEDDED AND ENCASED IN PCC AS SHOWN. PCC SHALL BE CLASS 450-C-2000(265-C-14). JOIN AND ALIGN PIPE AND FITTINGS BEFORE PLACING CONCRETE. MAINTAIN ALIGNMENT WHILE PLACING AND ALLOWING PCC TO SET.
4. THE ACCESS FRAME, COVER AND CAP SHALL BE CAST IRON. THE FINGER HOLES MAY BE DRILLED OR BLOCKED OUT PRIOR TO CASTING. THEY SHALL NOT BE PUNCHED OUT.
5. THE CONTRACTOR MAY PLACE EITHER CIRCULAR OR SQUARE CONCRETE PIPE WALL SUPPORTS.

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

TERMINAL CLEANOUT STRUCTURE — STANDARD PLAN 204-2

SHEET 2 OF 2

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

Call before you Dig
Avoid cutting underground utility lines. It's easy.
Call 811 OR 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
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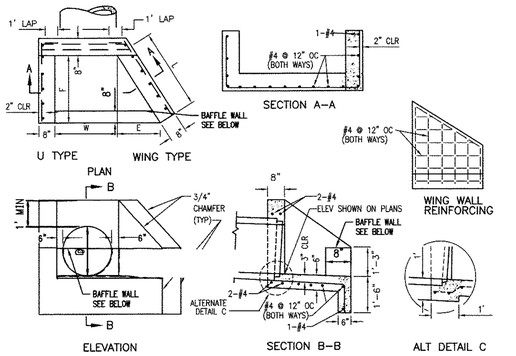
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

DETAIL SHEET

SHEET NO. 47 OF 51

PROJECT NO: IP19-006S

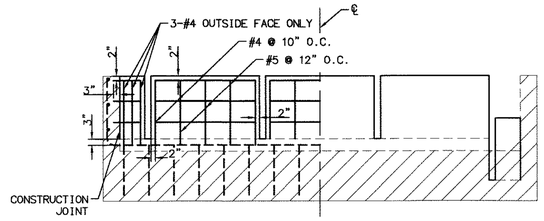
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# OF PIPE	DIMENSIONS			SINGLE PIPE				DOUBLE PIPE				
				W	U TYPE		WING TYPE		U TYPE		WING TYPE	
	L	E	F		CONC. (CY)	STEEL (LBS)	CONC. (CY)	STEEL (LBS)	W	CONC. (CY)	STEEL (LBS)	CONC. (CY)	STEEL (LBS)
18"	2'-3 1/8"	1'-3"	1'-10 1/2"	2'	0.55	35	0.63	43	AS SHOWN ON PLANS	0.82	53	0.90	61
24"	3'-1 7/8"	1'-9"	2'-7 1/2"	2'-6"	0.79	47	0.93	60		1.22	73	1.36	86
30"	4'-5/8"	2'-3"	3'-4 1/2"	3'	1.05	71	1.29	85		1.66	109	1.92	123
36"	4'-11 1/2"	2'-9"	4'-1 1/2"	3'-6"	1.33	88	1.69	114		2.19	136	2.55	162

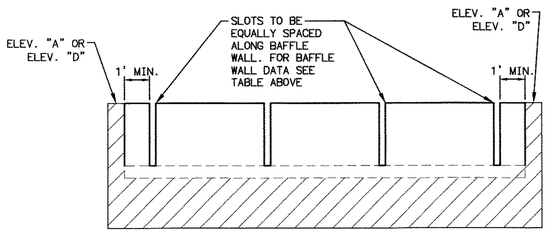
NOTES
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3. MULTIPLE PIPES SHALL BE SET A DISTANCE OF D/2, WITH A 1' MIN BETWEEN OUTSIDE DIAMETERS OF PIPES.
4. TOP OF HEADWALL SHALL BE PLACED APPROXIMATELY PARALLEL TO PROFILE GRADE WHEN THE GRADE IS 3% OR MORE.
5. SKEWED PIPES: DIMENSION W SHALL BE INCREASED IN WIDTH OR LENGTH DUE TO SKEW ON MULTIPLE PIPES.
6. USE ALTERNATE DETAIL C FOR PIPE WALL THICKNESS GREATER THAN 3".

(11) LEGEND ON PLANS



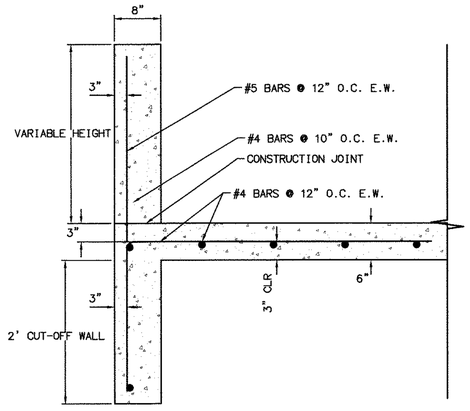
BAFFLE WALL REINFORCEMENT DETAIL

N.T.S.

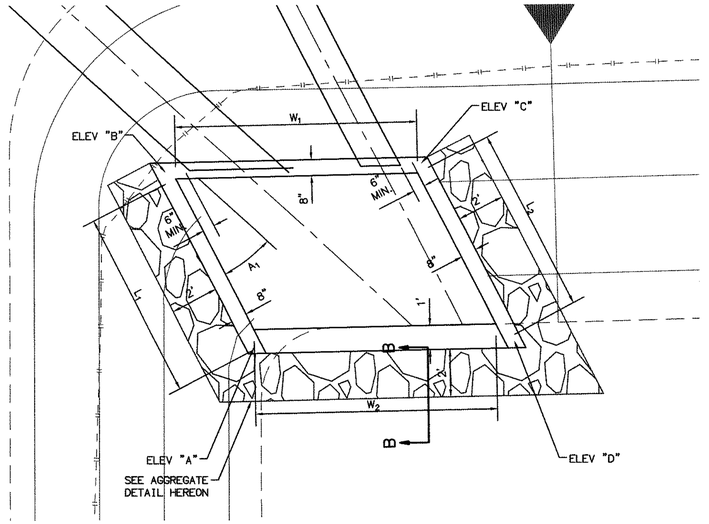


BAFFLE WALL DETAIL

N.T.S.



BAFFLE WALL - SECTION "B"-"B"



HEADWALL DETAIL

N.T.S.

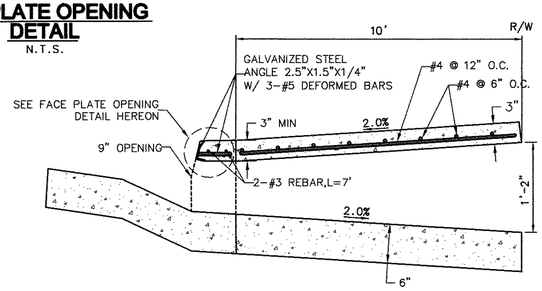
HEADWALL & WINGWALL DETAIL TABLE

	ANGLE 1	ANGLE 2	L_1	L_2	W_1	W_2	ELEV "A"	ELEV "B"	ELEV "C"	ELEV "D"	# OF SLOTS
LINE "1"	00°00'00"	00°00'00"	7.40'	7.36'	3.50'	3.50'	1453.00'	1454.85'	1454.85'	1453.00'	2
LINE "3" / "4"	20°00'00"	00°00'00"	7.85'	7.87'	10.19'	10.20'	1453.00'	1455.17'	1455.17'	1453.00'	4
LINE "6" / "7" / "8"	00°00'00"	00°00'00"	4.36'	4.36'	12.83'	12.86'	1453.00'	1454.45'	1454.45'	1453.00'	4
LINE "10"	00°00'00"	00°00'00"	9.05'	9.34'	3.02'	3.04'	1454.50'	1456.84'	1456.81'	1454.50'	2
LINE "12"	00°00'00"	00°00'00"	21.72'	15.14'	4.00'	4.00'	1455.00'	1458.94'	1458.94'	1455.00'	2



FACEPLATE OPENING DETAIL

N.T.S.



(34) CURB OPENING DETAIL

SCALE 1"=1'

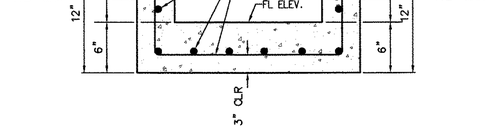
WATER QUALITY BMP NOTE:

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(11) HEADWALL (WING AND U TYPE) FOR PIPES 18" TO 36"

NOT TO SCALE



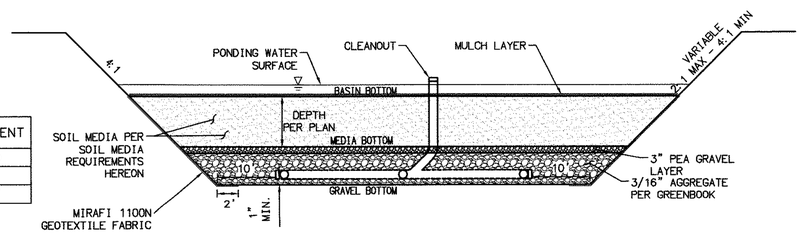
(40) CONCRETE "U" CHANNEL DETAIL

N.T.S.

NOTE: CONCRETE MUST BE AT LEAST 5.5 SACK MIX (5200-C-2500) AND HOLD 2500 P.S.I. IN 28 DAYS.

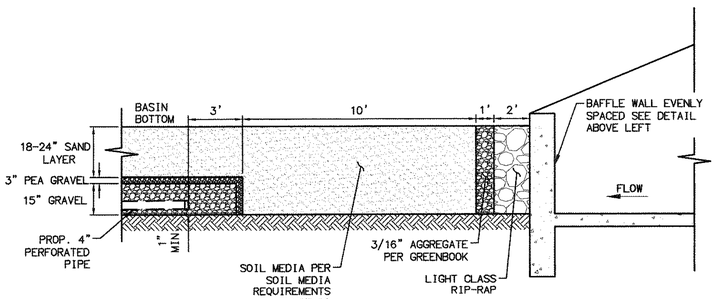
TABLE 1

% RANGE	COMPONENT
70-80	SAND
15-20	SILT
5-10	CLAY



BASIN CROSS SECTION "A"-"A"

N.T.S.



AGGREGATE/UNDER DRAIN DETAIL

N.T.S.

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Avoid cutting underground utility lines. It's a costly...
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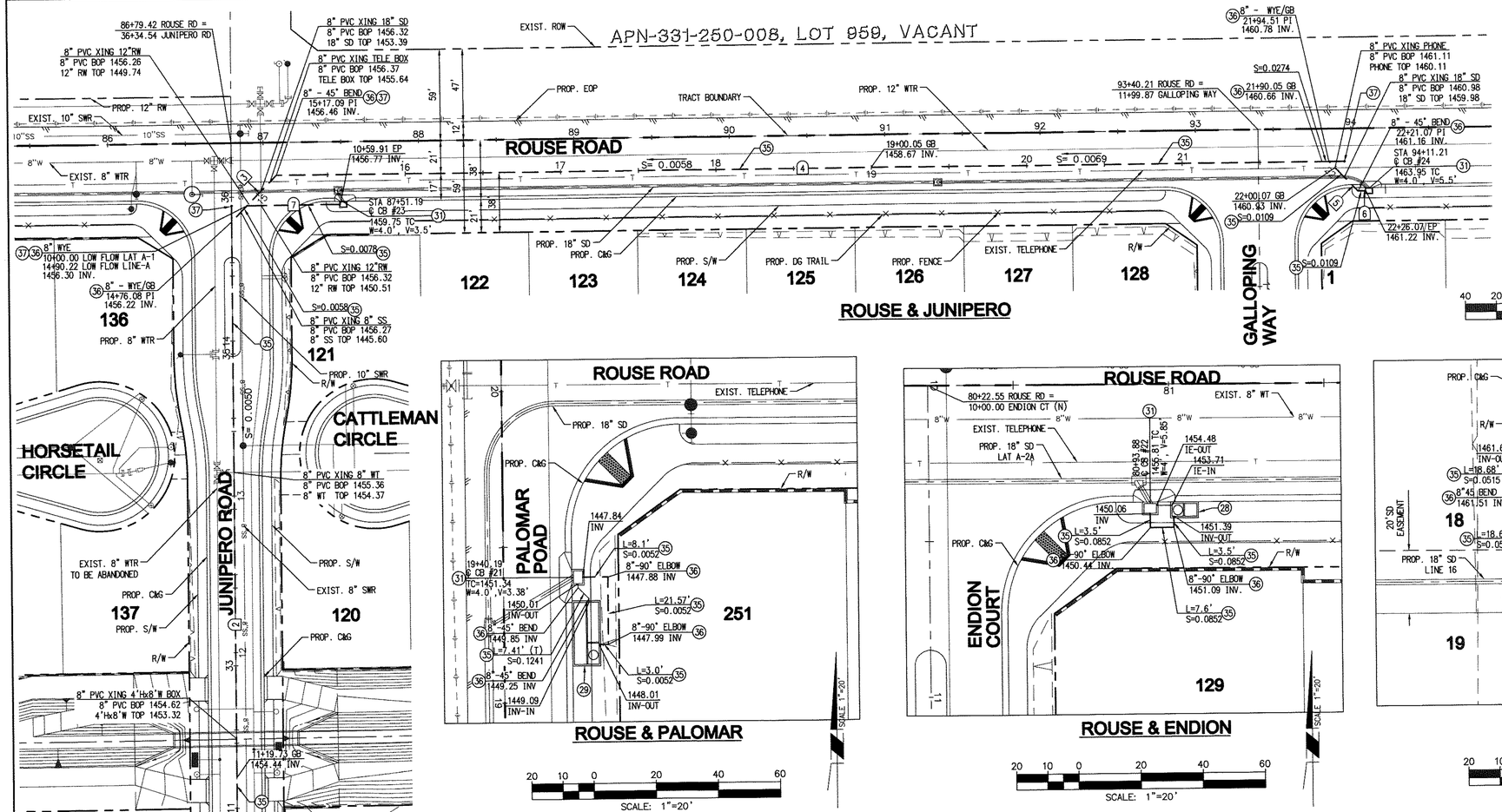
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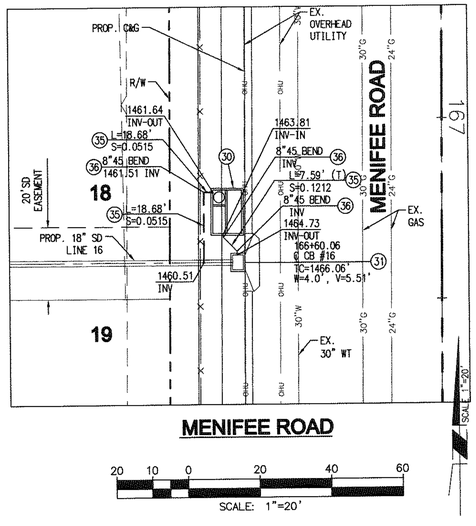
DETAIL SHEET

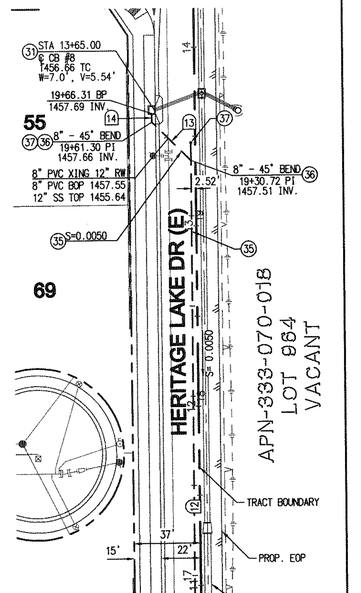
SHEET NO. 48 OF 51

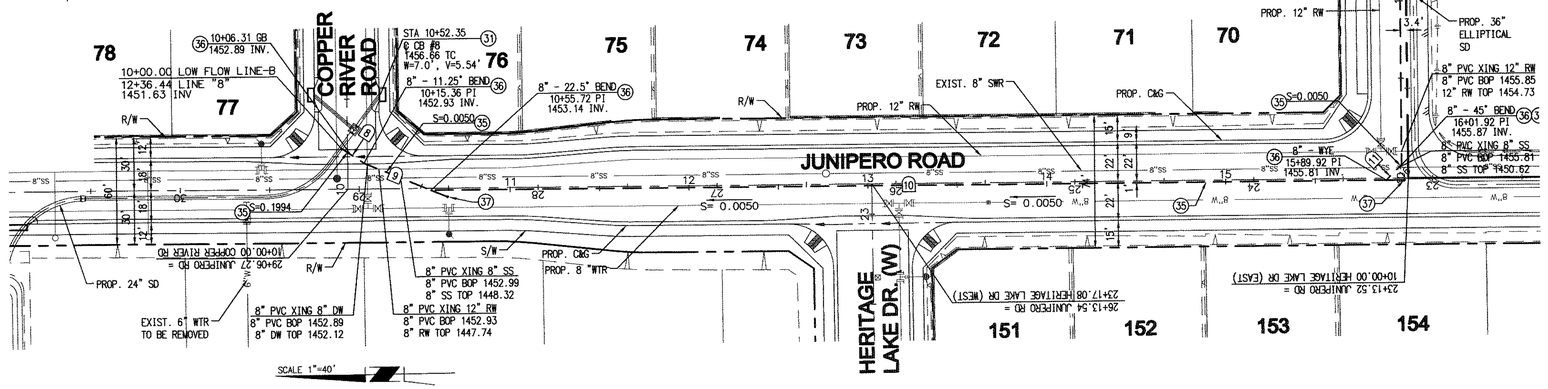
PROJECT NO: IP19-006S

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JUNIPERO ROAD & HERITAGE LAKE DRIVE

CONSTRUCTION NOTES

(28) CONSTRUCT BIO-CLEAN MWS-L-4-8-V PER DETAIL ON SHEET 51
(29) CONSTRUCT BIO-CLEAN MWS-L-8-20-V PER DETAIL ON SHEET 51
(30) CONSTRUCT BIO-CLEAN MWS-L-8-12-V PER DETAIL ON SHEET 51
(31) CONSTRUCT MODULAR TROUGH DIVERSION SYSTEM PER BIO CLEAN STD. DVERT DETAIL ON SHEET 46 & 51
(35) INSTALL 8" PVC SDR-17 PIPE OR APPROVED EQUAL.
(36) INSTALL PVC PIPE FITTING PER PLAN (SCH 80, SIZE AND TYPE SHOWN PER PLAN).
(37) INSTALL TERMINAL CLEANOUT STRUCTURE PER SPPWC STD. PLAN NO. 204-2.

LINE/CURVE DATA TABLE

NO	BEARING/DELTA	RADIUS	LENGTH	NOTE
1	N11°23'40"E	---	6.41'	LINE "A" - 8" PVC
2	N00°20'24"E	---	469.67'	LINE "A" - 8" PVC
3	N45°08'43"E	---	41.01'	LINE "A" - 8" PVC
4	N89°51'18"W	---	677.42'	LINE "A" - 8" PVC
5	N44°08'03"W	---	26.56'	LINE "A" - 8" PVC
6	N89°57'02"E	---	5.00'	LINE "A" - 8" PVC
7	N89°51'18"W	---	59.91'	LAT "A-1" - 8" PVC
8	N34°05'24"E	---	15.36'	LINE "B" - 8" PVC
9	N22°50'24"E	---	37.74'	LINE "B" - 8" PVC
10	N00°26'48"E	---	534.20'	LINE "B" - 8" PVC
11	N44°39'36"W	---	11.99'	LINE "B" - 8" PVC
12	N89°39'36"W	---	328.80'	LINE "B" - 8" PVC
13	N45°22'43"E	---	30.58'	LINE "B" - 8" PVC
14	N89°41'12"W	---	4.99'	LINE "B" - 8" PVC

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www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER
FRANCISCO MARTINEZ JR.
C-84640
CIVIL
STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	--
DATE:	12/2019

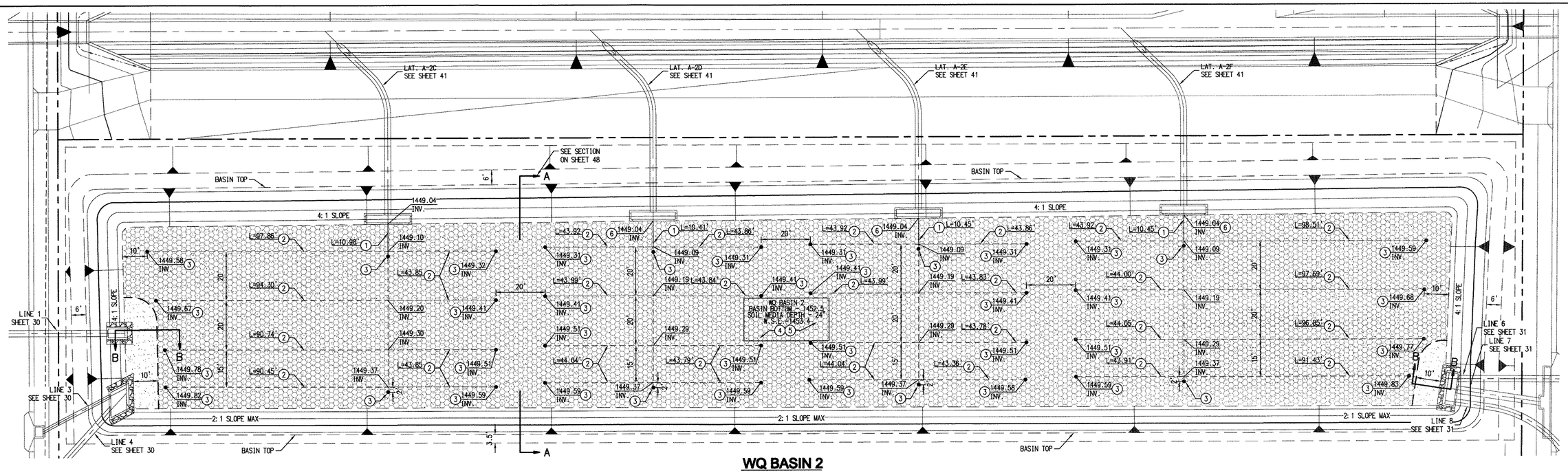
CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12-5-19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE

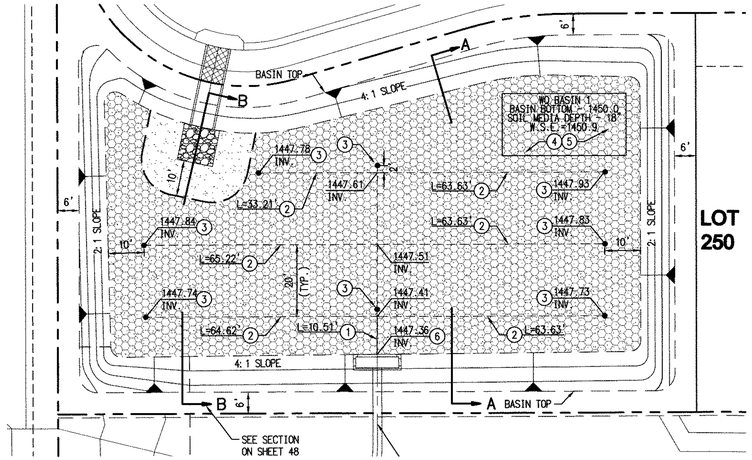
CITY OF MENIFEE
ENGINEERING DEPARTMENT
STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098
LOW FLOW DRAINAGE SYSTEM

SHEET NO. 49 OF 51
PROJECT NO: IP19-006S

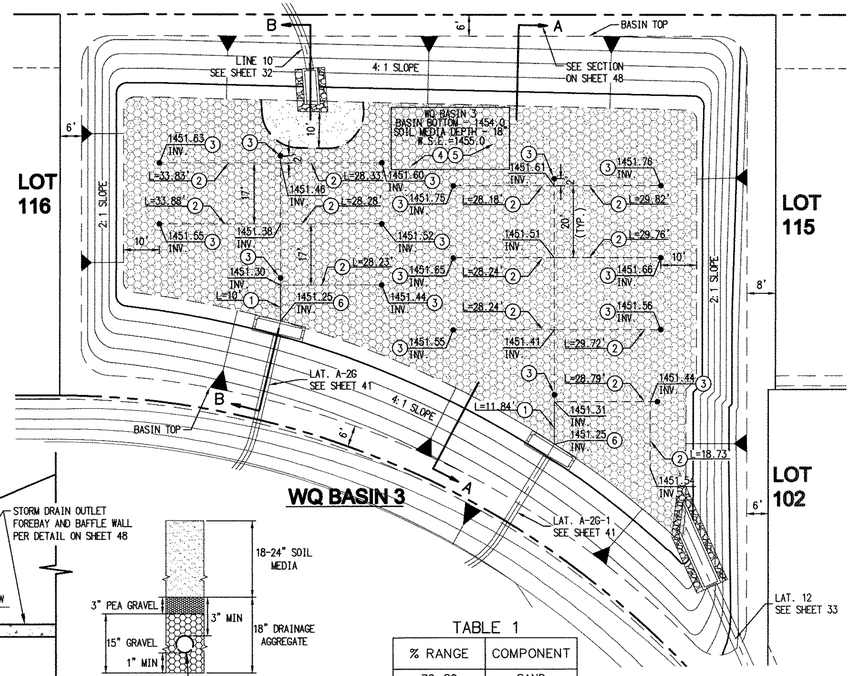
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WQ BASIN 2



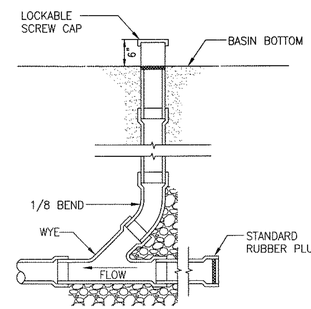
WQ BASIN 1



WQ BASIN 3

CONSTRUCTION NOTES

1	INSTALL 4" PVC COLLECTOR PIPE PER RIVERSIDE COUNTY LID BMP DESIGN HANDBOOK APPENDIX B. (S=0.0050)	- 450 L.F.
2	INSTALL 4" PERFORATED PVC LATERAL PIPE PER RIVERSIDE COUNTY LID BMP DESIGN HANDBOOK APPENDIX B PERFORATIONS TO MEET ASTM DESIGNATION C-700. (S=0.0050)	- 2,600 L.F.
3	INSTALL 4" CLEANOUT PER RIVERSIDE COUNTY LID BMP DESIGN HANDBOOK APPENDIX B AND DETAIL HEREON	- 62 EA
4	ENGINEERED SOIL MEDIA PER RIVERSIDE COUNTY LID BMP DESIGN HANDBOOK SECTION 3.5 AND DETAIL HEREON	- 6,3502 SF
5	DRAINAGE AGGREGATE PER RIVERSIDE COUNTY LID BMP DESIGN HANDBOOK SECTION 3.5 AND DETAIL HEREON GRAVEL PORTION TO BE AASHTO #57 STONE	- 6,3502 SF
6	INSTALL 4" INSERTA TEE WITH WATERTIGHT GASKET AT UNDERDRAIN CONNECTION TO STORM DRAIN	- 7 EA



3 CLEANOUT DETAIL
N.T.S.

LEGEND

- 4" CLEANOUT
- 4" SOLID COLLECTOR PIPE
- 4" PERFORATED LATERAL PIPE
- RIP RAP
- WQ SOIL MEDIA
- WQ GRAVEL MEDIA

SCALE 1"=20'

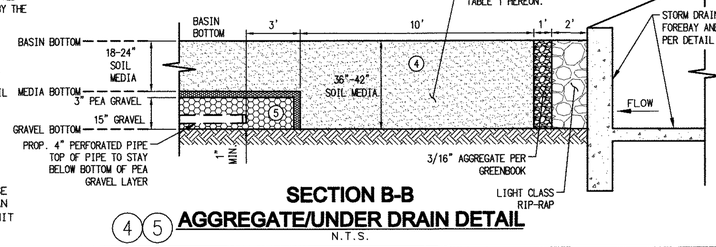
20 10 0 20 40 60

SCALE: 1"=20'

WATER QUALITY BMP NOTE:
BMPs FACILITIES SHALL NOT BE CONSTRUCTED UNTIL WQMP REPORT HAS BEEN APPROVED BY THE CITY.

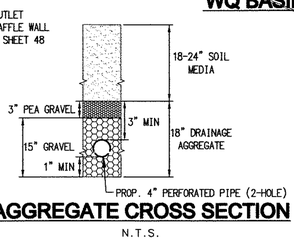
THE ENGINEERED SOIL MEDIA REQUIREMENTS:
THE ENGINEERED SOIL MEDIA SHALL BE COMPRISED OF 85 PERCENT CLASS A TOPSOIL PER GREENBOOK AND 15 PERCENT ORGANIC SOIL AMENDMENT PER GREENBOOK, BY VOLUME, AND DRUM MIXZED PRIOR TO PLACEMENT. THE CLASS A TOPSOIL SHALL MEET THE RANGE SPECIFIED IN TABLE 1, HEREON.

NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.



SECTION B-B

4 5 AGGREGATE/UNDER DRAIN DETAIL
N.T.S.



AGGREGATE CROSS SECTION
N.T.S.

TABLE 1

% RANGE	COMPONENT
70-80	SAND
15-20	SILT
5-10	CLAY

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

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DATE: 12/4/19

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CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

WQ BASIN UNDERDRAINS

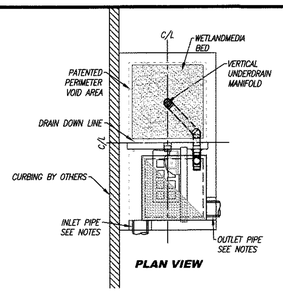
SHEET NO. 50 OF 51

PROJECT NO: IP19-006S

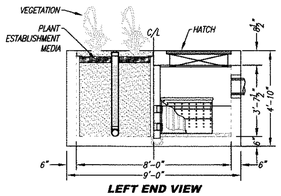
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SITE SPECIFIC DATA			
PROJECT NUMBER		9660	
ORDER NUMBER		----	
PROJECT NAME		MCCALL MESA TR 31098	
PROJECT LOCATION		MENIFEE, CA	
STRUCTURE ID		DMA 10	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.10	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			----
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	1453.71	PVC	8"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	1451.39	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	1455.81	1455.81	1455.81
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	36" X 36"	OPEN PLANTER	N/A
WETLANDMEDIA VOLUME (CY)			2.20
ORIFICE SIZE (DIA. INCHES)			#1.49"

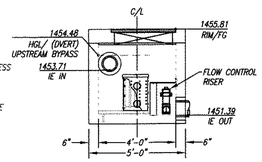
NOTES: PRELIMINARY NOT FOR CONSTRUCTION. UPSTREAM CATCH BASIN OUTLET TO BE SET AT 1453.81 AND THE UPSTREAM DVERT BYPASS WILL THEN BE 1454.48. ENGINEER RECOMMENDS TYPE II CEMENT AND "EPOXY OR EQUIVALENT [COATED REBAR] WHERE 3 IN OF CEMENT CANNOT BE ACHEIVED." ENGINEER MUST REVIEW. DVERT 10–8, 10'.



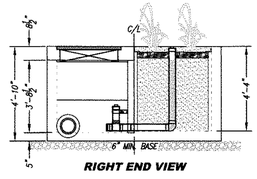
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



RIGHT END VIEW

28

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURERS SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURERS CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE TO VERIFY PROJECT ENGINEERS RECOMMENDED BASE SPECIFICATIONS.
4. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE. (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATER TIGHT PER MANUFACTURERS STANDARD CONNECTION DETAIL.
5. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL RISERS, MANHOLES, AND HATCHES. CONTRACTOR TO GROUT ALL MANHOLES AND HATCHES TO MATCH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
6. VEGETATION SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
7. CONTRACTOR RESPONSIBLE FOR CONTACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURERS WARRANTY IS VOID WITH OUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

TREATMENT FLOW (CFS)	0.103
OPERATING HEAD (FT)	3.0
PRETREATMENT LOADING RATE (GPM/SF)	1.8
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

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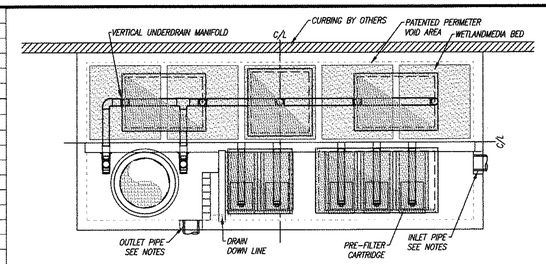
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Bio Clean — A Forterra Company

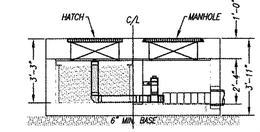
MWS-L-4-8-4'-4"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

SITE SPECIFIC DATA			
PROJECT NUMBER		9660	
ORDER NUMBER		----	
PROJECT NAME		MCCALL MESA TR 31098	
PROJECT LOCATION		MENIFEE, CA	
STRUCTURE ID		DMA 11	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.33	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			----
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	1449.09	PVC	8"
OUTLET PIPE	1448.01	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	1451.34	1451.34	1451.34
SURFACE LOAD	PEDESTRIAN	PEDESTRIAN	PEDESTRIAN
FRAME & COVER	72"X30"	2 EA 30"X48", 36"X36"	30"
WETLANDMEDIA VOLUME (CY)			8.23
ORIFICE SIZE (DIA. INCHES)			#2.11" EA

NOTES: PRELIMINARY NOT FOR CONSTRUCTION. UPSTREAM CATCH BASIN OUTLET TO BE SET AT 1449.34 AND THE UPSTREAM DVERT BYPASS WILL THEN BE 1450.01. ENGINEER RECOMMENDS TYPE II CEMENT AND "EPOXY OR EQUIVALENT [COATED REBAR] WHERE 3" OF CEMENT CANNOT BE ACHEIVED." ENGINEER MUST REVIEW. SHALLOW PRETREATMENT CARTRIDGE'S REQUIRED. DVERT 10–8, 10'.



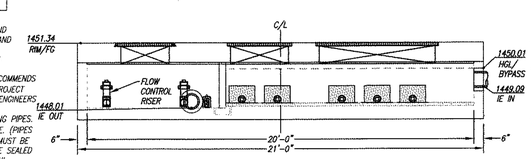
PLAN VIEW



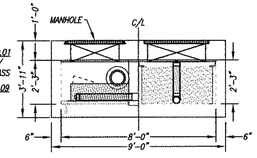
LEFT END VIEW

INSTALLATION NOTES

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ELEVATION VIEW



RIGHT END VIEW

29

GENERAL NOTES

1. MANUFACTURER TO PROVIDE ALL MATERIALS UNLESS OTHERWISE NOTED.
2. ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE. FOR PROJECT SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES PLEASE CONTACT BIO CLEAN.

TREATMENT FLOW (CFS)	0.33
OPERATING HEAD (FT)	1.9
PRETREATMENT LOADING RATE (GPM/SF)	2.8
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

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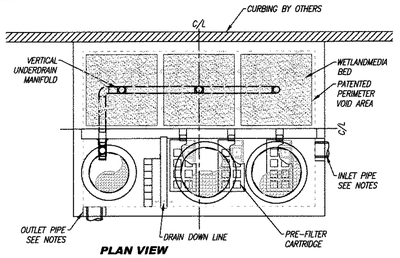
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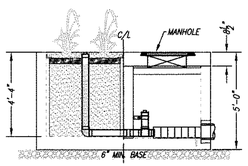
MWS-L-8-20-2'-3"-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

SITE SPECIFIC DATA			
PROJECT NUMBER		9660	
ORDER NUMBER		----	
PROJECT NAME		MCCALL MESA TR 31098	
PROJECT LOCATION		MENIFEE, CA	
STRUCTURE ID		DMA 12	
TREATMENT REQUIRED			
VOLUME BASED (CF)		FLOW BASED (CFS)	
N/A		0.30	
TREATMENT HGL AVAILABLE (FT)			N/K
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			UPSTREAM BYPASS
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	1463.81	PVC	8"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	1461.64	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	1466.06	1466.06	1466.06
SURFACE LOAD	PEDESTRIAN	OPEN PLANTER	PEDESTRIAN
FRAME & COVER	2EA ø30"	OPEN PLANTER	ø24"
WETLANDMEDIA VOLUME (CY)			6.60
ORIFICE SIZE (DIA. INCHES)			ø2.57"

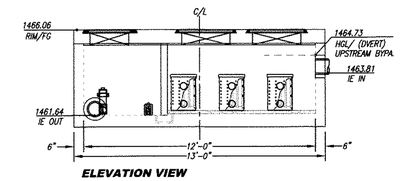
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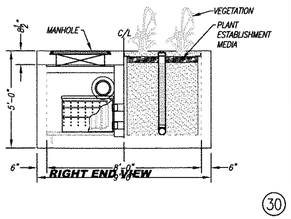
PLAN VIEW



LEFT END VIEW



ELEVATION VIEW



RIGHT END VIEW

30

INSTALLATION NOTES

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TREATMENT FLOW (CFS)	0.305
OPERATING HEAD (FT)	3.0
PRETREATMENT LOADING RATE (GPM/SF)	1.8
WETLAND MEDIA LOADING RATE (GPM/SF)	1.0

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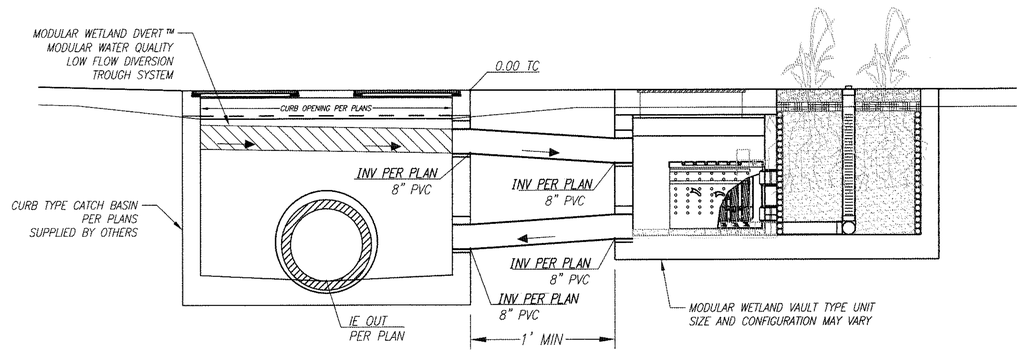
MWS-L-8-12-4'-4"-V
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

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NOTE: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT AND/OR GRADING PERMIT HAS BEEN ISSUED.

MODULAR WETLAND SYSTEMS - LINEAR 2.0
STANDARD DVERT ELEVATIONS

MODULAR WETLANDS



TYPICAL ELEVATION VIEW

*SEE DETAIL ON SHEET 46 FOR CONFIGURATION DETAILS

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MODULAR WETLAND SYSTEMS INC.
P.O. BOX 865
OCEANSIDE, CA 92049
www.ModularWetlands.com

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	NAME	DATE
DRAWN		
EXTED		

COMMENTS:

TITLE: MWS LINEAR 2.0 DVERT SETUP

SIZE | DWG. NO. | REV

SCALE: NTS | UNITS = INCHES | SHEET 1 OF 1

Call before you Dig
Avoid cutting underground utility lines. It's costly.
Call 811 or 1-800-227-2600

REVISIONS

SHT.	DESCRIPTION	DATE	BY	APRD

FMCIVIL ENGINEERS INC.
29995 TECHNOLOGY DRIVE, STE 306
MURRIETA | CA 92563
951.973.0201
www.fmcivil.com

PREPARED BY:
FRANCISCO MARTINEZ, JR.
R.C.E. NO.: 84640
DATE: 12/4/19

REGISTERED PROFESSIONAL ENGINEER — FRANCISCO MARTINEZ JR. — C-84640 — CIVIL — STATE OF CALIFORNIA

SCALE:	AS SHOWN
DESIGN:	CTM
DRAWN:	CTM
CHECKED:	FM
APPROVED:	---
DATE:	12/2019

CITY OF MENIFEE
ENGINEERING DEPARTMENT
JONATHAN G. SMITH
DIRECTOR OF PUBLIC WORKS/
CITY ENGINEER
RCE 61253
EXP. 6/30/21
12.5.19 DATE
RECOMMENDED BY:
12/5/19 DATE

CITY OF MENIFEE
ENGINEERING DEPARTMENT

STREET AND STORM DRAIN IMPROVEMENT PLANS FOR:
TRACT 31098

MODULAR WETLANDS DETAILS

SHEET NO. 51 OF 51

PROJECT NO: IP19-006S

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