SAKE ENGINEERS, INC.

Engineering - Surveying - Land Development

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FINAL HYDROLOGY AND HYDRAULIC REPORT

For

TTM 36864
ON CORONA AVE @ I-15
APN 122-180-027
CORONA, CALIFORNIA

Prepared For:

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AL-WAAFA FAMILY TRUST
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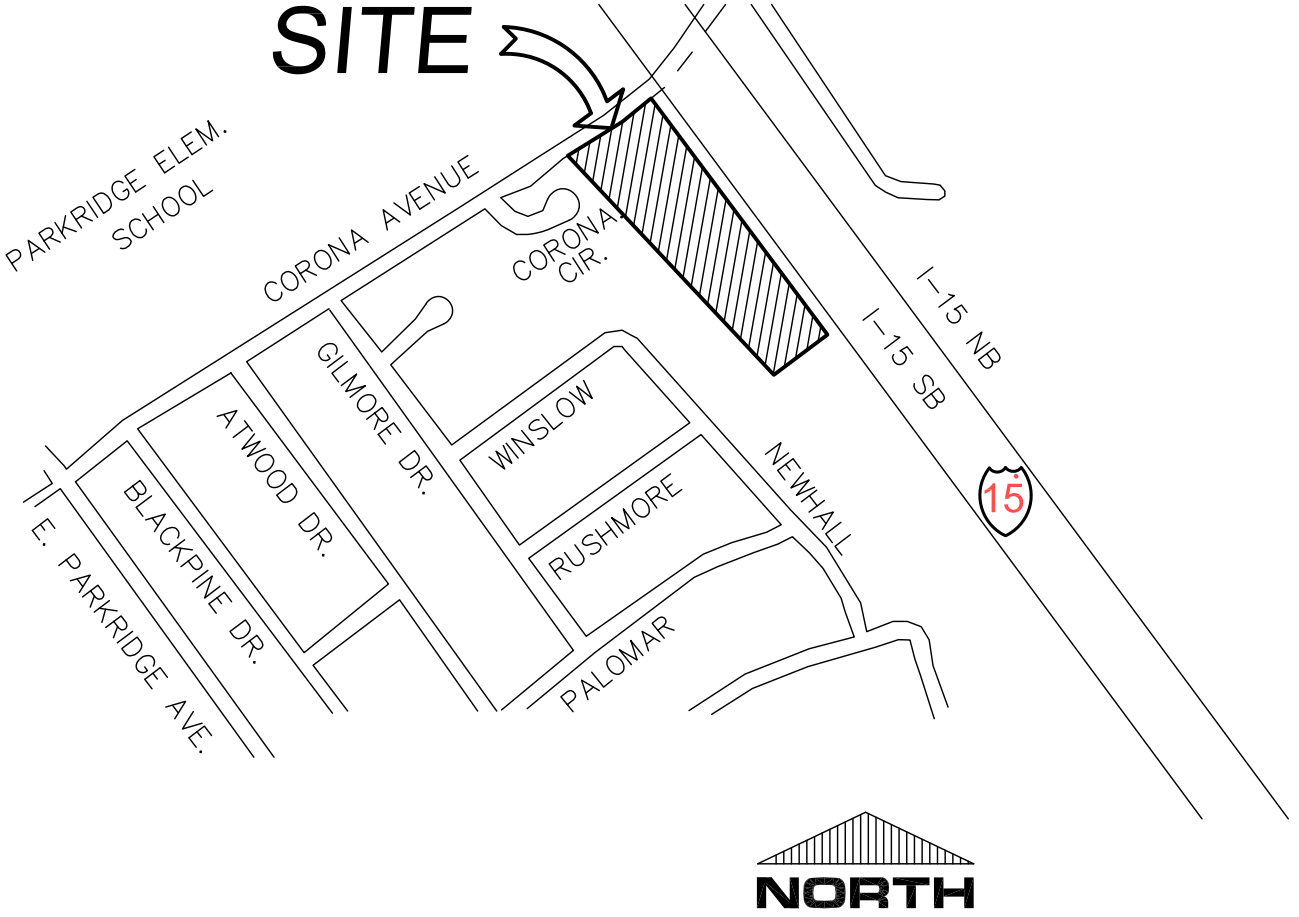
May 2023
Job No. 3360



VICINITY MAP

NTS

TABLE OF CONTENTS

EXHIBITS:

INTRODUCTION

The purpose of this report is to document hydrology and hydraulic calculations for the development of Tentative Tract Map 36864 on Corona Ave at I-15 in City of Corona, CA (APN 122-180-027)
This development consists of total area of 2.1 ac.

Riverside County Flood Control & Water Conservation District (RCFC&WCD) Hydrology Manual methods are used in these calculations.

PRE-DEVELOPMENT CONDITION

The project site is vacant . The site is sloping from South to North with highest point at 619 feet above mean sea level and lowest point at Corona Ave at elevation of 600.

Existing slope along the 15 freeway will be conveyed via a brow ditch to a parkway drain to Corona Ave.

PROJECT OFFSITE

Storm runoff from the slopes of I-15 freeway enter the project site from the East. The project proposes a lined ditch to receive and convey the runoff before entering the project site.

POST-DEVELOPMENT CONDITION

The proposed project subdivides the parcel into 7 lots of about 1/5 Ac with private street access to Corona Circle.

PEAK RUNOFF (CFS)

	EXISTING`			DEVELPED		
AREA (Ac)	Q_{10}	Q_{100}	% PRVS	Q_{10}	Q_{100}	% PRVS
2.1	2.9	5.1	100%	3.4	5.9	50%
1.1 (Offsite)					3.2	

CONCLUSION

The water quality is mitigated thru use of a Modular Wetland System for the project.

House pads are set with minimum elevation of 1 ft above 100 yr flood level, thus providing adequate flood protection for residential pads.

SOFTWARE

We used Software from CivilCADD/Civil Design based on the 1978 Hydrology Manual of RCFC&WCD.

RAINFALL

Rainfall Data for project area is based on Plate D-4.1

10 yr 1hour rainfall 0.94 in
100 yr 1hour rainfall 1.45 in

SOIL

Plate C-1.14 of the RCFC&WCD Hydrology Manual(attached) show hydrological soil group for this project as type “B”

Rational Method

Pre-development

10-year

100-year

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
Rational Hydrology Study Date: 04/06/23 File:3360pre10.out

TTM36864
PreDev10Yr

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

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

Sake Consulting Engineers, inc., Corona, CA - S/N 4084

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

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

Standard intensity-duration curves data (Plate D-4.1)
For the [Corona] area used.
10 year storm 10 minute intensity = 2.220(In/Hr)
10 year storm 60 minute intensity = 0.940(In/Hr)
100 year storm 10 minute intensity = 3.430(In/Hr)
100 year storm 60 minute intensity = 1.450(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.940(In/Hr)
Slope of intensity duration curve = 0.4800

++

Process from Point/Station 1.000 to Point/Station 2.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 700.000(Ft.)
Top (of initial area) elevation = 619.000(Ft.)
Bottom (of initial area) elevation = 600.000(Ft.)
Difference in elevation = 19.000(Ft.)
Slope = 0.02714 s(percent)= 2.71
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.982 min.
Rainfall intensity = 1.830(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.747

```
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 =      2.868(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            2.10 (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
```

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
Rational Hydrology Study Date: 04/06/23 File:3360pre.out

TTM36864
PreDev100yr

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

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

Sake Consulting Engineers, inc., Corona, CA - S/N 4084

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

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

Standard intensity-duration curves data (Plate D-4.1)
For the [Corona] area used.
10 year storm 10 minute intensity = 2.220(In/Hr)
10 year storm 60 minute intensity = 0.940(In/Hr)
100 year storm 10 minute intensity = 3.430(In/Hr)
100 year storm 60 minute intensity = 1.450(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.450(In/Hr)
Slope of intensity duration curve = 0.4800

++

Process from Point/Station 1.000 to Point/Station 2.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 700.000(Ft.)
Top (of initial area) elevation = 619.000(Ft.)
Bottom (of initial area) elevation = 600.000(Ft.)
Difference in elevation = 19.000(Ft.)
Slope = 0.02714 s(percent)= 2.71
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 14.982 min.
Rainfall intensity = 2.822(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.854

```
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 3)  =  89.80
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      5.062(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            2.10 (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
```

Rational Method

Post-development

10-year

100-year

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
Rational Hydrology Study Date: 04/06/23 File:3360post10.out

TTM36864
PostDev10Yr

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

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

Sake Consulting Engineers, inc., Corona, CA - S/N 4084

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

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

Standard intensity-duration curves data (Plate D-4.1)
For the [Corona] area used.
10 year storm 10 minute intensity = 2.220(In/Hr)
10 year storm 60 minute intensity = 0.940(In/Hr)
100 year storm 10 minute intensity = 3.430(In/Hr)
100 year storm 60 minute intensity = 1.450(In/Hr)

Storm event year = 10.0
Calculated rainfall intensity data:
1 hour intensity = 0.940(In/Hr)
Slope of intensity duration curve = 0.4800

++

Process from Point/Station 1.000 to Point/Station 2.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 660.000(Ft.)
Top (of initial area) elevation = 619.000(Ft.)
Bottom (of initial area) elevation = 600.000(Ft.)
Difference in elevation = 19.000(Ft.)
Slope = 0.02879 s(percent)= 2.88
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.642 min.
Rainfall intensity = 2.156(In/Hr) for a 10.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.753

```
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 =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      3.409(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            2.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  56.0
```

```
                Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
     Rational Hydrology Study        Date: 04/06/23  File:3360post.out
------------------------------------------------------------------------
TTM36864
PostDev100Yr


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

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

------------------------------------------------------------------------
Sake Consulting Engineers, inc., Corona, CA     - S/N  4084
------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

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

Standard intensity-duration curves data (Plate D-4.1)
For the [ Corona ] area used.
10 year storm 10 minute intensity =  2.220(In/Hr)
10 year storm 60 minute intensity =  0.940(In/Hr)
100 year storm 10 minute intensity =  3.430(In/Hr)
100 year storm 60 minute intensity =  1.450(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.450(In/Hr)
Slope of intensity duration curve = 0.4800

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Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   660.000(Ft.)
Top (of initial area) elevation =   619.000(Ft.)
Bottom (of initial area) elevation =   600.000(Ft.)
Difference in elevation =    19.000(Ft.)
Slope =    0.02879  s(percent)=       2.88
TC = k(0.390)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   10.642 min.
Rainfall intensity =      3.326(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/4 Acre Lot)
Runoff Coefficient = 0.846
```

```
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 3)  =  74.80
Pervious area fraction =  0.500; Impervious fraction =  0.500
Initial subarea runoff =      5.912(CFS)
Total initial stream area =        2.100(Ac.)
Pervious area fraction = 0.500
End of computations, total study area =            2.10 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.500
Area averaged RI index number =  56.0
```

Rational Method

Off site

100-year

```
            Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
      Rational Hydrology Study        Date: 04/06/23  File:3360off10.out
------------------------------------------------------------------------
TTM36864
Offsite10yr


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

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

------------------------------------------------------------------------
Sake Consulting Engineers, inc., Corona, CA     - S/N  4084
------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

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

Standard intensity-duration curves data (Plate D-4.1)
For the [ Corona ] area used.
10 year storm 10 minute intensity =  2.220(In/Hr)
10 year storm 60 minute intensity =  0.940(In/Hr)
100 year storm 10 minute intensity =  3.430(In/Hr)
100 year storm 60 minute intensity =  1.450(In/Hr)

Storm event year =  10.0
Calculated rainfall intensity data:
1 hour intensity =  0.940(In/Hr)
Slope of intensity duration curve = 0.4800




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Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =   645.000(Ft.)
Bottom (of initial area) elevation =   605.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.06250  s(percent)=       6.25
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.234 min.
Rainfall intensity =      2.017(In/Hr) for a    10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.759
```

```
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 =      1.836(CFS)
Total initial stream area =        1.200(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            1.20 (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
```

```
           Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 1999 Version 6.2
     Rational Hydrology Study        Date: 06/21/21  File:3360OFF.out
------------------------------------------------------------------------
 *********   Hydrology Study Control Information **********

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

------------------------------------------------------------------------
Sake Consulting Engineers, inc., Corona, CA     - S/N  4084
------------------------------------------------------------------------
Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

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

Standard intensity-duration curves data (Plate D-4.1)
For the [ Corona ] area used.
10 year storm 10 minute intensity =  2.220(In/Hr)
10 year storm 60 minute intensity =  0.940(In/Hr)
100 year storm 10 minute intensity =  3.430(In/Hr)
100 year storm 60 minute intensity =  1.450(In/Hr)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity =  1.450(In/Hr)
Slope of intensity duration curve = 0.4800




++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        1.000 to Point/Station        2.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   640.000(Ft.)
Top (of initial area) elevation =   645.000(Ft.)
Bottom (of initial area) elevation =   605.000(Ft.)
Difference in elevation =    40.000(Ft.)
Slope =    0.06250  s(percent)=       6.25
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.234 min.
Rainfall intensity =      3.111(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.858
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 3)  =  89.80
```

```
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      3.203(CFS)
Total initial stream area =        1.200(Ac.)
Pervious area fraction = 1.000
End of computations, total study area =            1.20 (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
```

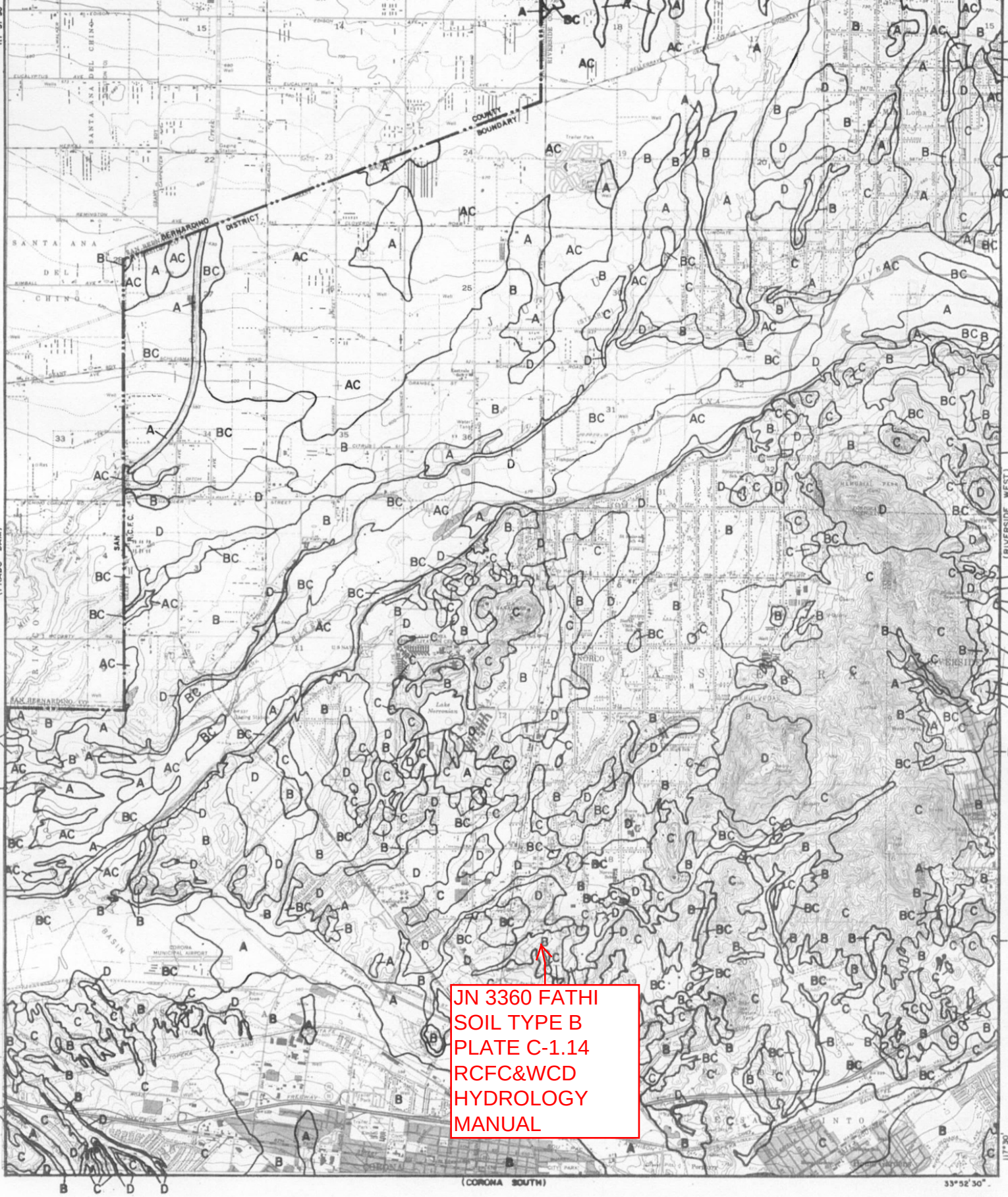
EXHIBITS:

Rainfall for Corona NOAA Atlas 14

Soil Map Plate C-1.14

Pre-development Hydrology Map

Post-development Hydrology Map



JN 3360 FATHI
SOIL TYPE B
PLATE C-1.14
RCFC&WCD
HYDROLOGY
MANUAL

LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC & WCD
HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR CORONA–NORTH

NOAA Atlas 14, Volume 6, Version 2
Location name: Corona, California, USA*
Latitude: 33.8905°, Longitude: -117.5567°
Elevation: m/ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.099** (0.083-0.119)	**0.133** (0.111-0.161)	**0.179** (0.149-0.217)	**0.218** (0.180-0.267)	**0.273** (0.217-0.345)	**0.316** (0.246-0.409)	**0.361** (0.274-0.480)	**0.409** (0.302-0.560)	**0.476** (0.336-0.681)	**0.530** (0.361-0.786)
10-min	**0.142** (0.118-0.171)	**0.191** (0.159-0.230)	**0.257** (0.214-0.311)	**0.312** (0.258-0.382)	**0.391** (0.311-0.495)	**0.453** (0.353-0.587)	**0.518** (0.393-0.688)	**0.587** (0.433-0.803)	**0.683** (0.482-0.976)	**0.760** (0.518-1.13)
15-min	**0.171** (0.143-0.207)	**0.230** (0.192-0.279)	**0.311** (0.259-0.377)	**0.378** (0.312-0.462)	**0.472** (0.377-0.599)	**0.548** (0.427-0.709)	**0.626** (0.476-0.832)	**0.709** (0.523-0.971)	**0.826** (0.583-1.18)	**0.919** (0.626-1.36)
30-min	**0.252** (0.211-0.304)	**0.339** (0.283-0.410)	**0.457** (0.380-0.554)	**0.556** (0.459-0.680)	**0.695** (0.554-0.880)	**0.805** (0.628-1.04)	**0.921** (0.700-1.22)	**1.04** (0.770-1.43)	**1.21** (0.858-1.74)	**1.35** (0.921-2.00)
60-min	**0.373** (0.312-0.451)	**0.502** (0.419-0.607)	**0.677** (0.564-0.821)	**0.823** (0.680-1.01)	**1.03** (0.821-1.31)	**1.19** (0.930-1.55)	**1.37** (1.04-1.81)	**1.55** (1.14-2.12)	**1.80** (1.27-2.57)	**2.00** (1.37-2.97)
2-hr	**0.553** (0.462-0.668)	**0.736** (0.615-0.890)	**0.982** (0.818-1.19)	**1.19** (0.979-1.45)	**1.47** (1.17-1.86)	**1.69** (1.32-2.19)	**1.93** (1.46-2.56)	**2.17** (1.60-2.97)	**2.51** (1.77-3.58)	**2.77** (1.89-4.11)
3-hr	**0.684** (0.572-0.826)	**0.912** (0.762-1.10)	**1.22** (1.01-1.47)	**1.47** (1.21-1.79)	**1.81** (1.45-2.30)	**2.09** (1.63-2.70)	**2.37** (1.80-3.15)	**2.66** (1.96-3.64)	**3.06** (2.16-4.38)	**3.38** (2.30-5.01)
6-hr	**0.956** (0.800-1.16)	**1.29** (1.08-1.56)	**1.74** (1.45-2.10)	**2.10** (1.73-2.57)	**2.60** (2.07-3.30)	**2.99** (2.33-3.87)	**3.39** (2.58-4.51)	**3.81** (2.81-5.21)	**4.37** (3.09-6.25)	**4.82** (3.28-7.14)
12-hr	**1.21** (1.01-1.46)	**1.71** (1.43-2.07)	**2.36** (1.97-2.86)	**2.90** (2.39-3.54)	**3.62** (2.89-4.59)	**4.18** (3.26-5.42)	**4.76** (3.62-6.33)	**5.35** (3.95-7.33)	**6.16** (4.35-8.81)	**6.79** (4.63-10.1)
24-hr	**1.57** (1.39-1.81)	**2.31** (2.04-2.67)	**3.28** (2.89-3.80)	**4.07** (3.56-4.75)	**5.14** (4.35-6.20)	**5.97** (4.95-7.34)	**6.81** (5.51-8.58)	**7.68** (6.05-9.94)	**8.86** (6.70-11.9)	**9.78** (7.16-13.6)
2-day	**1.99** (1.76-2.29)	**2.93** (2.59-3.38)	**4.16** (3.67-4.82)	**5.17** (4.52-6.03)	**6.54** (5.53-7.88)	**7.59** (6.30-9.34)	**8.66** (7.02-10.9)	**9.78** (7.70-12.7)	**11.3** (8.54-15.2)	**12.5** (9.12-17.4)
3-day	**2.19** (1.94-2.52)	**3.21** (2.84-3.71)	**4.56** (4.01-5.28)	**5.65** (4.94-6.60)	**7.15** (6.05-8.62)	**8.31** (6.89-10.2)	**9.49** (7.68-12.0)	**10.7** (8.44-13.9)	**12.4** (9.36-16.7)	**13.7** (10.0-19.1)
4-day	**2.39** (2.11-2.75)	**3.50** (3.09-4.04)	**4.96** (4.37-5.75)	**6.16** (5.39-7.19)	**7.80** (6.60-9.40)	**9.07** (7.52-11.2)	**10.4** (8.39-13.1)	**11.7** (9.22-15.2)	**13.5** (10.2-18.2)	**15.0** (10.9-20.9)
7-day	**2.75** (2.43-3.17)	**4.01** (3.54-4.63)	**5.67** (5.00-6.57)	**7.04** (6.16-8.22)	**8.93** (7.56-10.8)	**10.4** (8.62-12.8)	**11.9** (9.64-15.0)	**13.5** (10.6-17.4)	**15.6** (11.8-21.1)	**17.3** (12.7-24.2)
10-day	**2.97** (2.63-3.42)	**4.31** (3.81-4.97)	**6.09** (5.37-7.06)	**7.57** (6.62-8.84)	**9.62** (8.15-11.6)	**11.2** (9.31-13.8)	**12.9** (10.4-16.2)	**14.6** (11.5-18.9)	**17.0** (12.9-22.9)	**18.9** (13.8-26.4)
20-day	**3.56** (3.15-4.11)	**5.13** (4.54-5.93)	**7.27** (6.41-8.42)	**9.07** (7.93-10.6)	**11.6** (9.82-14.0)	**13.6** (11.3-16.8)	**15.7** (12.7-19.8)	**18.0** (14.2-23.3)	**21.1** (16.0-28.5)	**23.6** (17.3-32.9)
30-day	**4.22** (3.73-4.87)	**6.03** (5.33-6.97)	**8.53** (7.52-9.88)	**10.7** (9.32-12.4)	**13.7** (11.6-16.5)	**16.1** (13.4-19.9)	**18.7** (15.2-23.6)	**21.5** (16.9-27.8)	**25.4** (19.2-34.3)	**28.6** (20.9-39.9)
45-day	**5.03** (4.45-5.80)	**7.08** (6.26-8.18)	**9.96** (8.77-11.5)	**12.4** (10.9-14.5)	**16.0** (13.6-19.3)	**19.0** (15.7-23.3)	**22.1** (17.9-27.9)	**25.5** (20.1-33.0)	**30.4** (23.0-41.0)	**34.5** (25.2-48.1)
60-day	**5.82** (5.15-6.72)	**8.06** (7.13-9.31)	**11.2** (9.90-13.0)	**14.0** (12.2-16.4)	**18.1** (15.3-21.8)	**21.4** (17.8-26.4)	**25.1** (20.3-31.6)	**29.1** (22.9-37.6)	**34.9** (26.4-47.0)	**39.7** (29.1-55.4)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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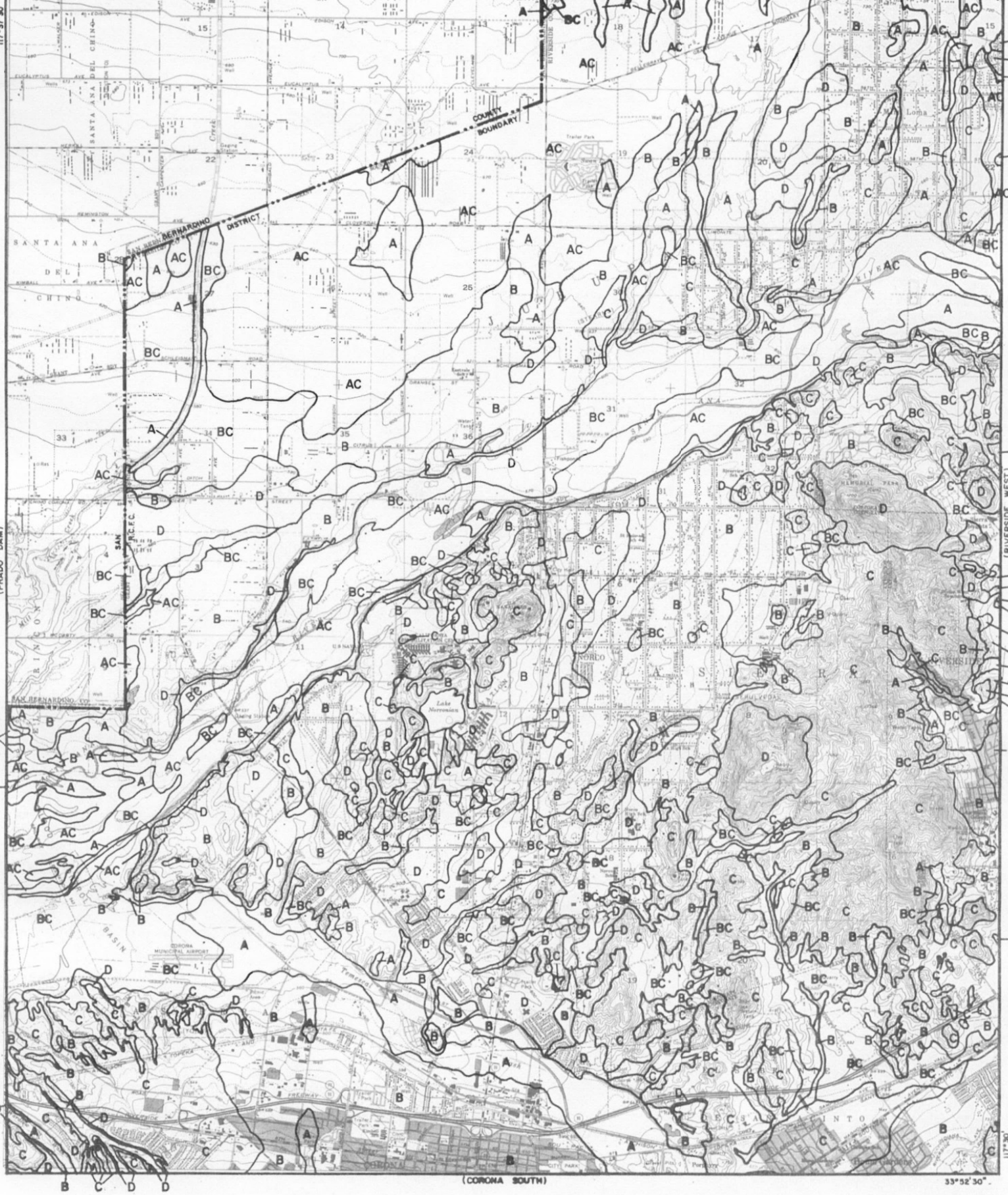
PF graphical



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC&WCD

HYDROLOGY MANUAL

0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR CORONA–NORTH

OWNER/DEVELOPER:

FATHI MANASRAH, P.E.
AL-WAAFA FAMILY TRUST
9319 ALTA CRESTA AVENUE
RIVERSIDE, CA 92508
TEL. (951) 581-2330

ENGINEER:

SAKE ENGINEERS, INC.
400 S. RAMONA AVE., STE. 202
CORONA, CA 92879
(951) 279-4041 PH.

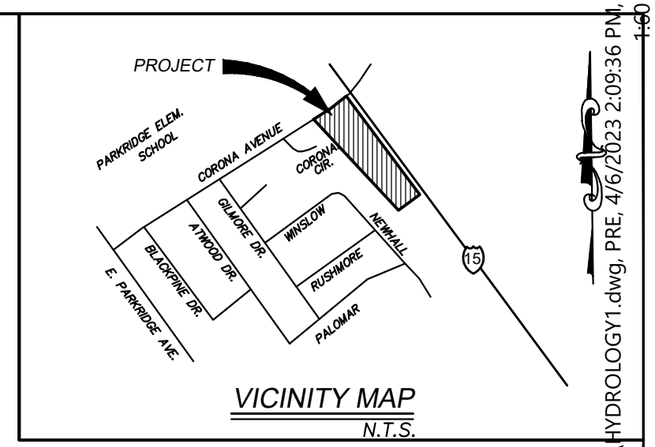
ASSESSORS PARCEL NO.:

122-180-027

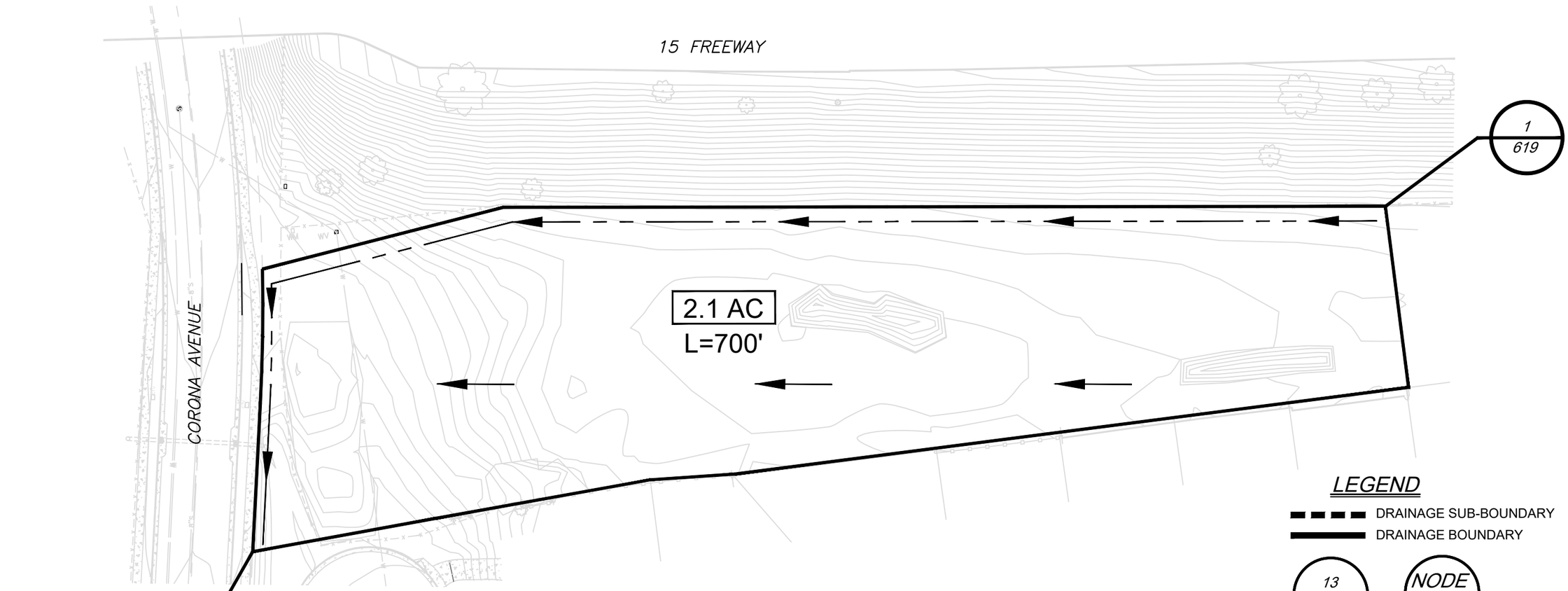
PRE DEVELOPMENT HYDROLOGY MAP

FOR

TENTATIVE TRACT NO. 36864



VICINITY MAP
N.T.S.



SOILS "B" TYPE

LEGEND

- DRAINAGE SUB-BOUNDARY
- DRAINAGE BOUNDARY
- 13 / 1460 — NODE / ELEV.
- AC — DRAINAGE AREA IN ACERS

REGISTERED PROFESSIONAL ENGINEER
SAM A.KBARPOUR
C053038
CIVIL
STATE OF CALIFORNIA

SAKE ENGINEERS, INC.
www.sakengineers.com
ENGINEERING ● SURVEYING ● LAND DEVELOPMENT
400 S. RAMONA AVE., STE. 202
CORONA, CALIFORNIA 92879
(951) 279-4041 FAX: (951) 279-2830

CITY OF CORONA
PRE DEVELOPMENT
HYDROLOGY MAP
FOR
TENTATIVE TRACT NO. 36864

DWG. NO. XX-XXXX

Sh 1 of 1

POST DEVELOPMENT HYDROLOGY MAP
FOR
TENTATIVE TRACT NO. 36864

OWNER/DEVELOPER:

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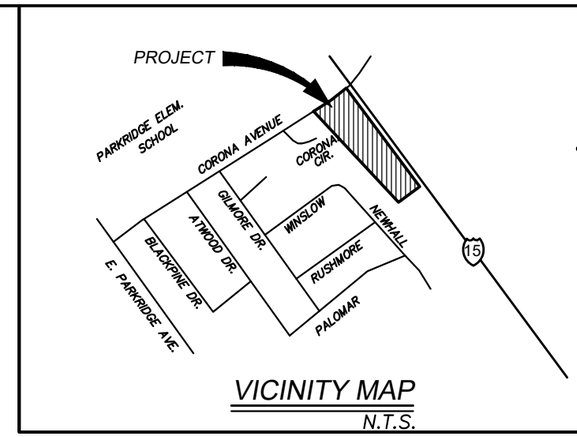
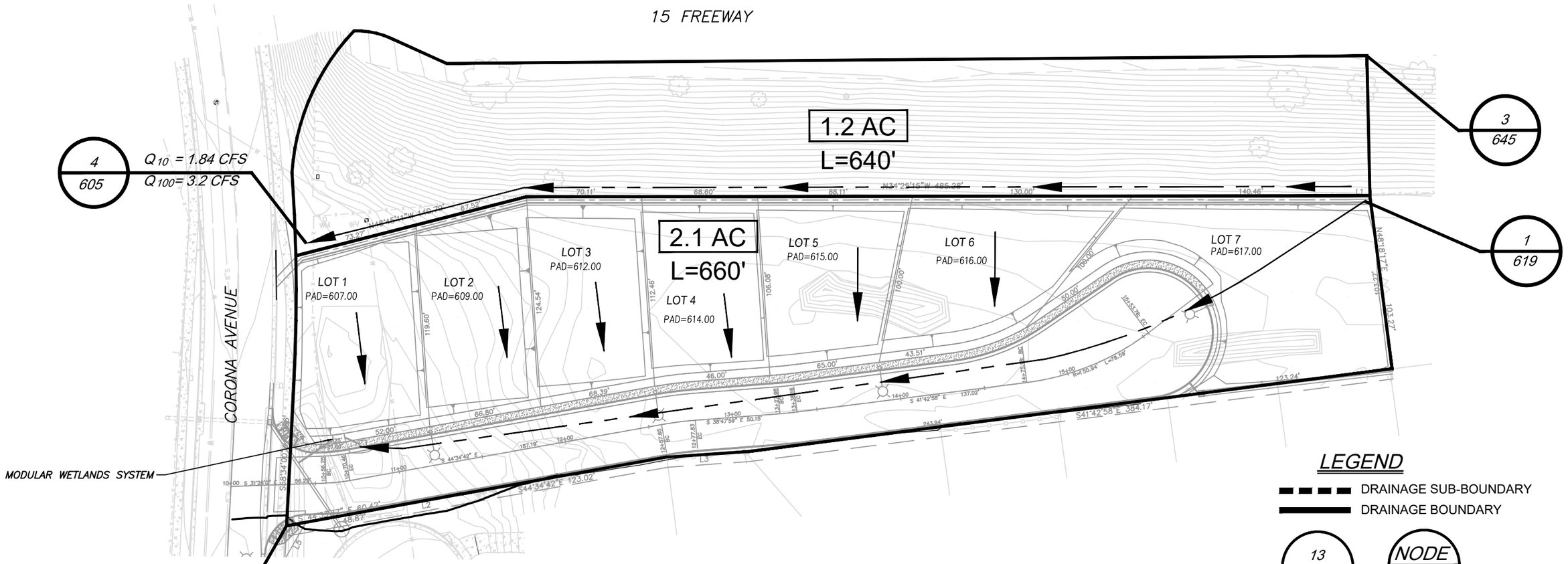


VICINITY MAP
N.T.S.



SOILS "B" TYPE

0 60

1 inch = 60 ft.

LEGEND

- DRAINAGE SUB-BOUNDARY
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XX-XXXX

Sh 1 of 1