

Suiter *Surveying* *& Land Planning, Inc.*

BROOKHOLLOW SENIOR APARTMENTS

Hydrology Report

For: Socayr, Inc.
September 13, 2023



By: Suiter Surveying & Land Planning, Inc.
William M. Suiter, PE
1805A Alpine Drive
Clarksville, TN 37040
(931) 920-1750
TN Lic. 117294

The site proposed for development is a currently vacant lot consisting of 8.38 acres (+/-). For purposes of analysis, approximately 0.57 acres (+/-) of off-site right of way have been included in the following hydrologic model since proposed grading activities will extend into this area as well.

The intention of the design as it relates to stormwater runoff is to withhold post-development runoff rates to values less-than or equal-to pre-developed conditions. The following table compares the pre-developed, uncontrolled condition of runoff with the post-developed, detention-routed condition for the 2, 5, 10, 25, 50 & 100-year rain events with 24-hour durations:

Return Event (24 hr)	Pre-Developed Runoff (cfs)	Post-Developed Runoff (cfs)
2 year	8.2	8.1
5 year	13.7	11.9
10 year	18.7	17.7
25 year	26.4	23.0
50 year	33.0	29.0
100 year	40.1	37.7

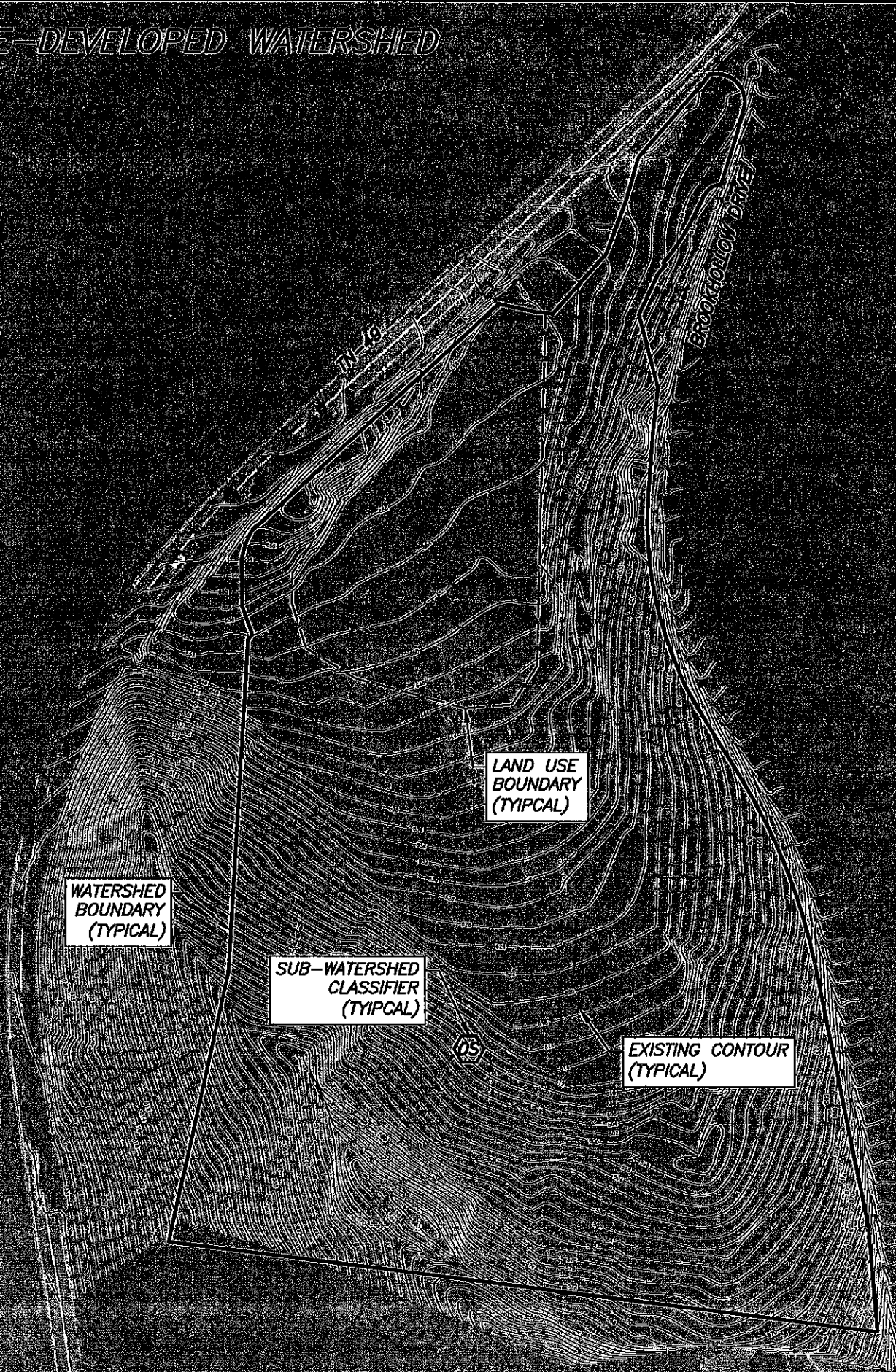
Referencing the hydrologic model in which the SCS method was used, the pre-developed analysis is fairly straightforward. Approximately 7.69 acres are classified as woods, with the remaining 1.26 acres classified as rangeland. Steep slopes on the site limit the time of concentration to just under 16 minutes.

The post-developed drainage model breaks the development down into multiple sub-watersheds, each with its own specific characteristics. Essentially, the storm piping system across the site is the final outfall for each subbasin. The drainage structures were designed to transport the 100 year/24 hour storm event effectively. For means of conservatism, we assigned a minimum value of 6.0 minutes for the times of concentration on subbasins 1S-7S, with 8S having a longer than minimum time of concentration since it encompasses the bypassing runoff which contains a lot of the wooded areas and some of the shallower slopes once re-grading is completed.

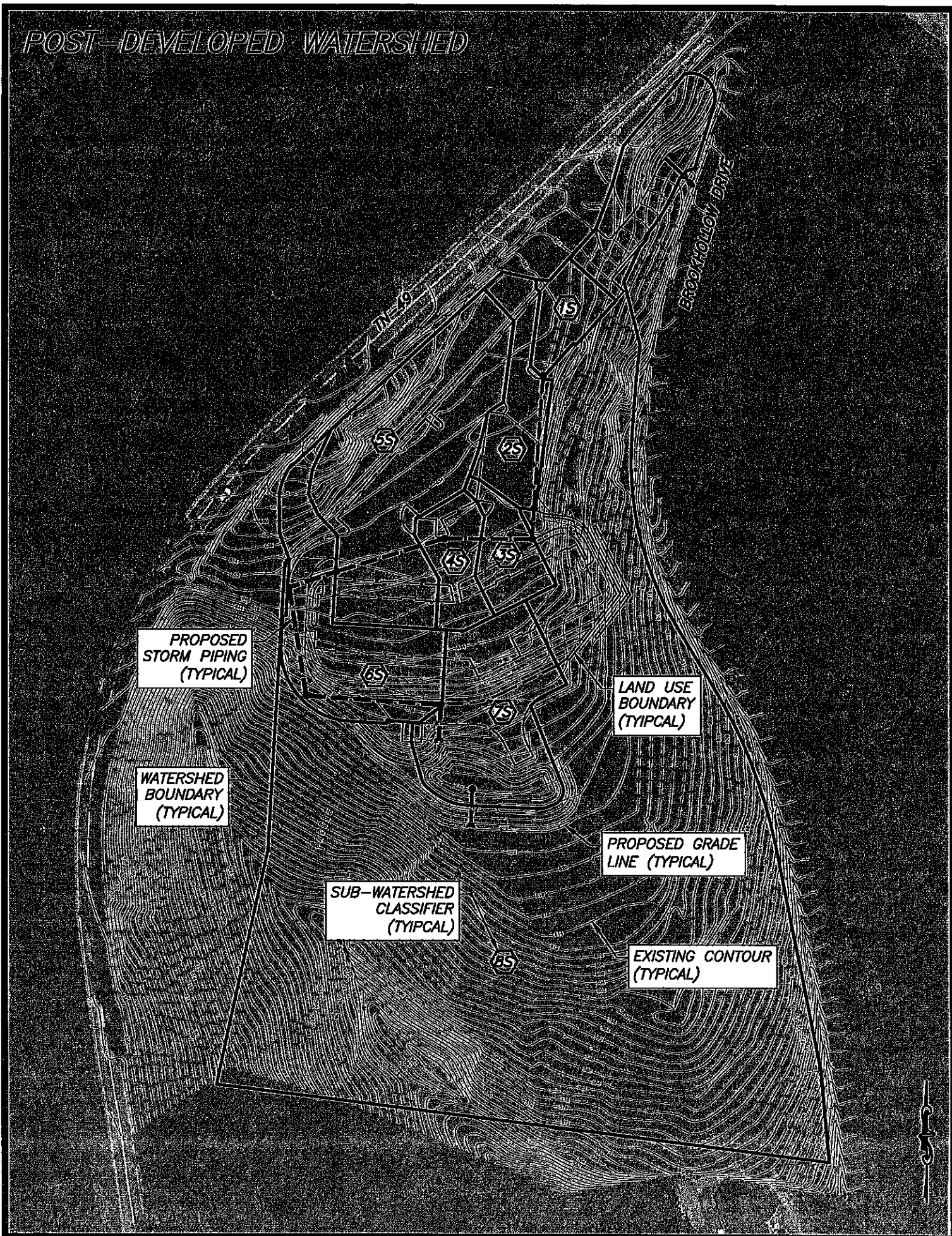
The relative drainage maps for pre-developed and post-developed conditions have been included with this report to allow for referencing of model data with each relative subbasin. Data for each subbasin such as times of concentration, contributing drainage areas, SCS curve numbers, etc. can be found in the attached model. As mentioned, the proposed storm piping system across the site was designed to transport the 100 year/24 hour rain event, which is the storm that the attached model reflects. Noting this, in order to determine head elevations at each proposed catch basin/area drain on site, reference can be made to the "Peak Elevation" noted for each area drain that the subbasins rout to. When producing a dynamic model such as this (which iterates tailwater conditions to determine peak headwaters) we can simply compare the peak elevation of each outlet structure with its corresponding top of grate elevation to verify that no surcharging should be expected and the piping system does in fact have the capacity to transport the 100 year/24 hour storm effectively (which is the case throughout). For the trench drain analysis, instead of giving you a peak elevation like the catch basin nodes do, the trench drain reach provides an average estimated flow depth of 0.19' during the 100 year storm which is significantly less than its 12-18" design depth. See the drainage maps below:

Concerning the design of the erosion control measures on site, the project flow generally from west to east and north to south on fairly steep slopes, inside of a naturally wooded landscape. Design criteria for silt fences in the TDEC Erosion and Sediment Control Handbook allows for $\frac{1}{4}$ acre of upstream drainage area per 100 linear feet of (unbacked) silt fencing. On the portion of the site that we have chosen to control with silt fencing, there is approximately 1.3 acres of upstream contributing drainage area. In order to stay on contour with each silt fence and still provide an adequate barrier for disturbance, the silt fencing has been broken up into multiple effective "layers" as the runoff travels downstream. In all, we are proposing 770 LF of silt fencing to cover the area, with a back-up barrier of protected cover from the existing wooded area.

PRE-DEVELOPED WATERSHED



POST-DEVELOPED WATERSHED



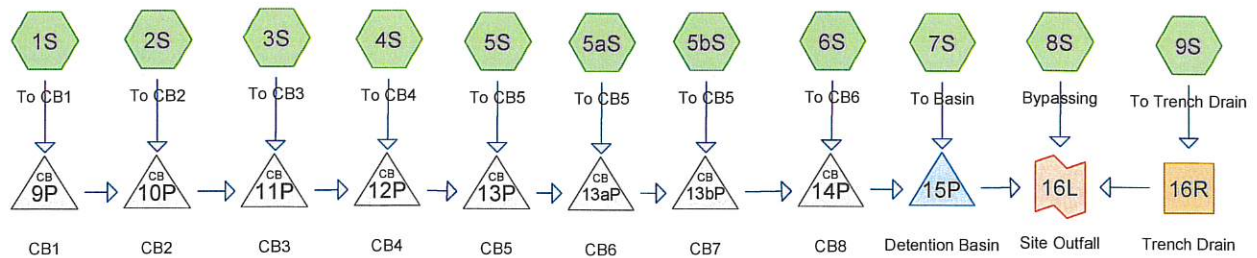
Brookhollow Senior Apartments

Pre-Development



To Outfall

Post-Development



Routing Diagram for Runoff

Prepared by {enter your company name here}, Printed 9/13/2023
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Runoff

Prepared by {enter your company name here}

Printed 9/13/2023

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.211	61	>75% Grass cover, Good, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S)
1.257	61	Pasture/grassland/range, Good, HSG B (OS)
1.747	98	Paved parking, HSG B (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S)
13.681	66	Woods, Poor, HSG B (8S, OS)

Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

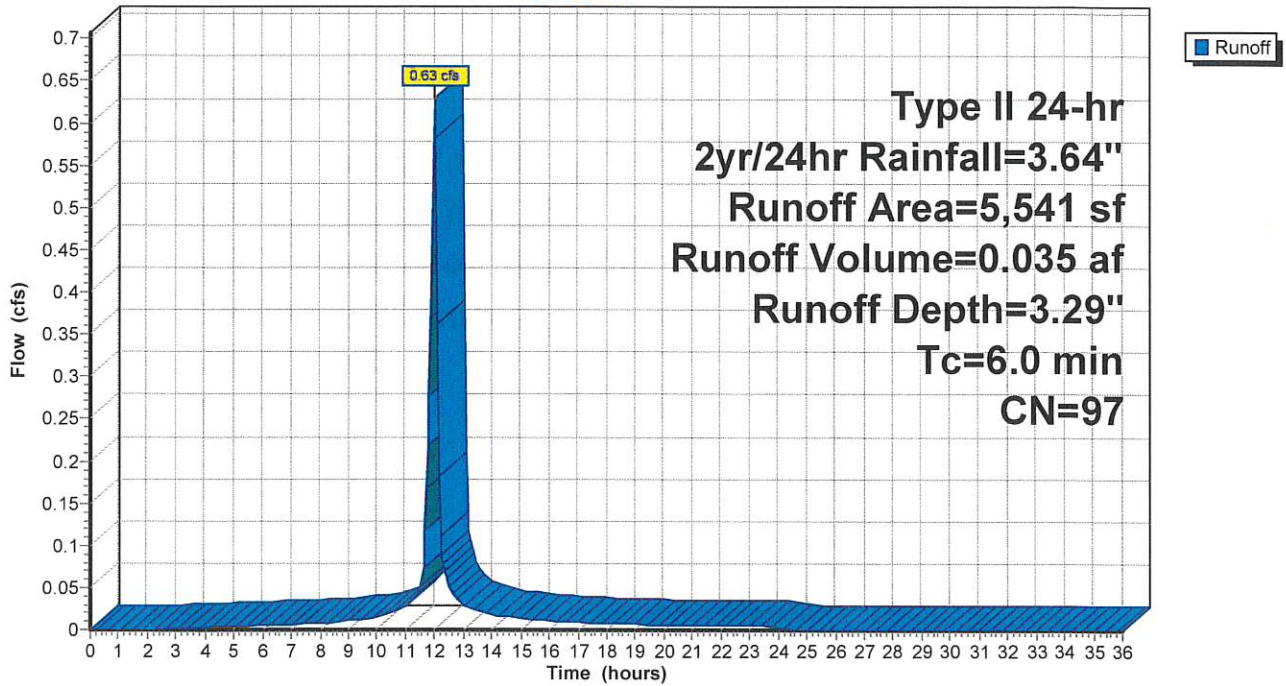
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 3

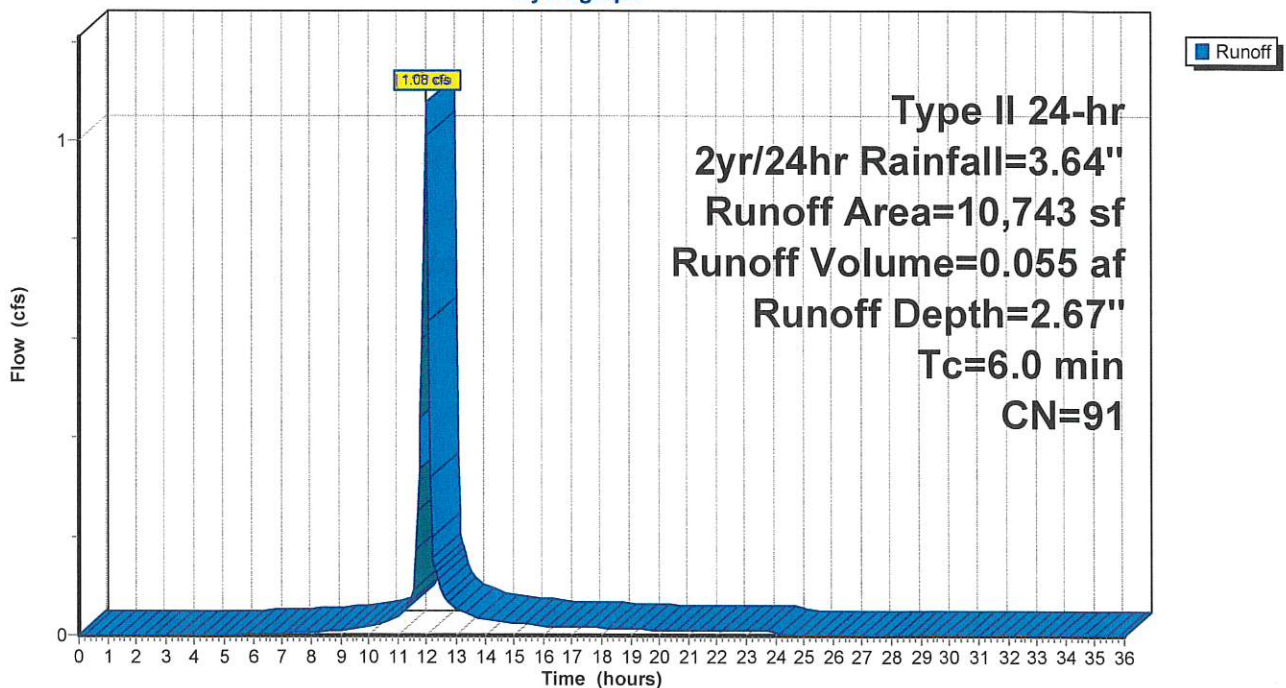
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

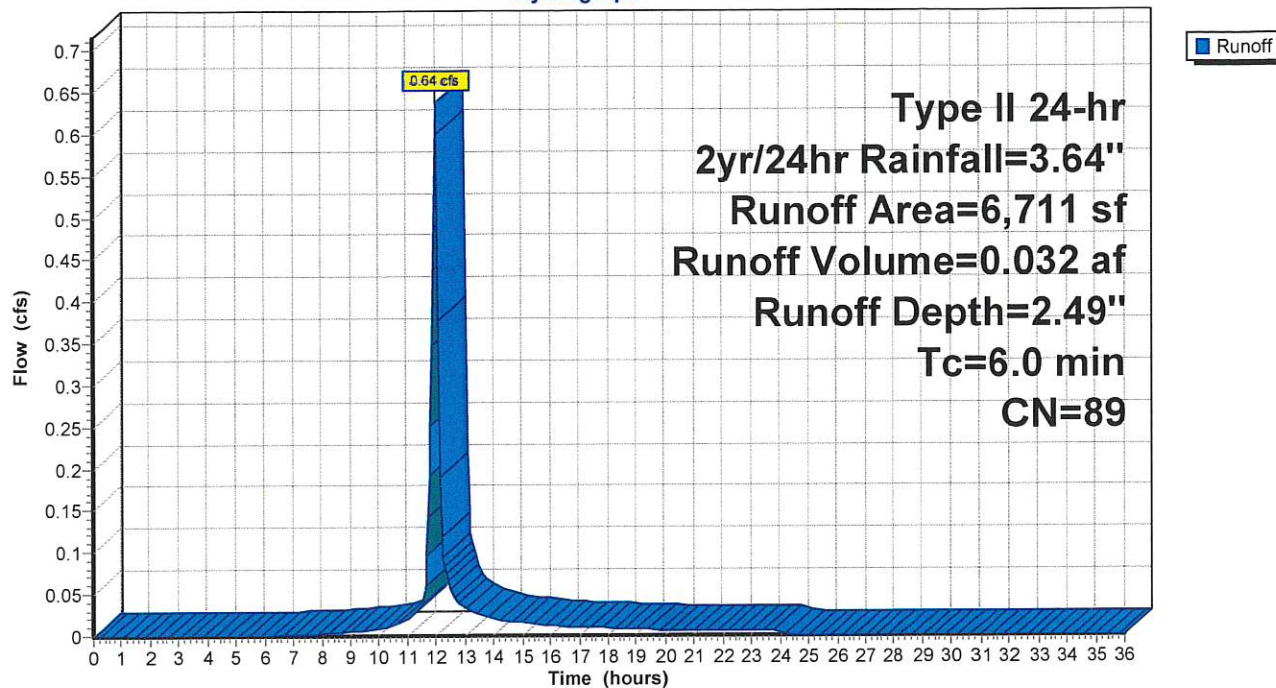
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 4

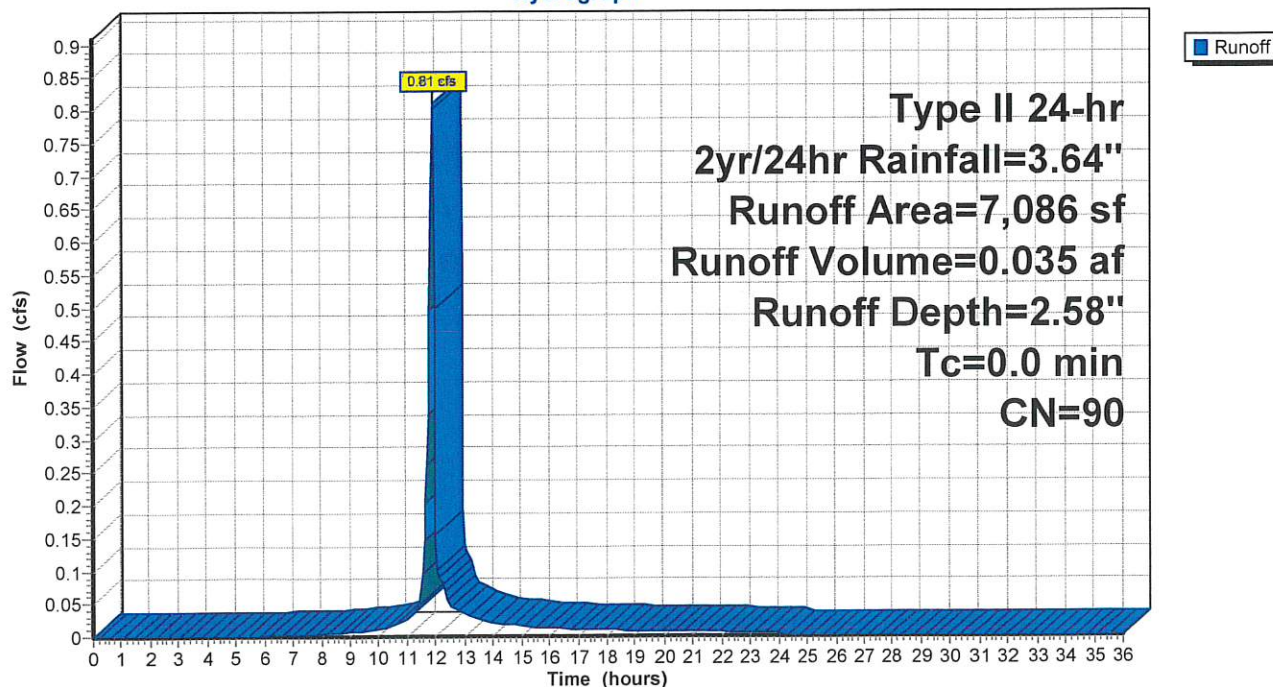
Subcatchment 3S: To CB3

Hydrograph



Subcatchment 4S: To CB4

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

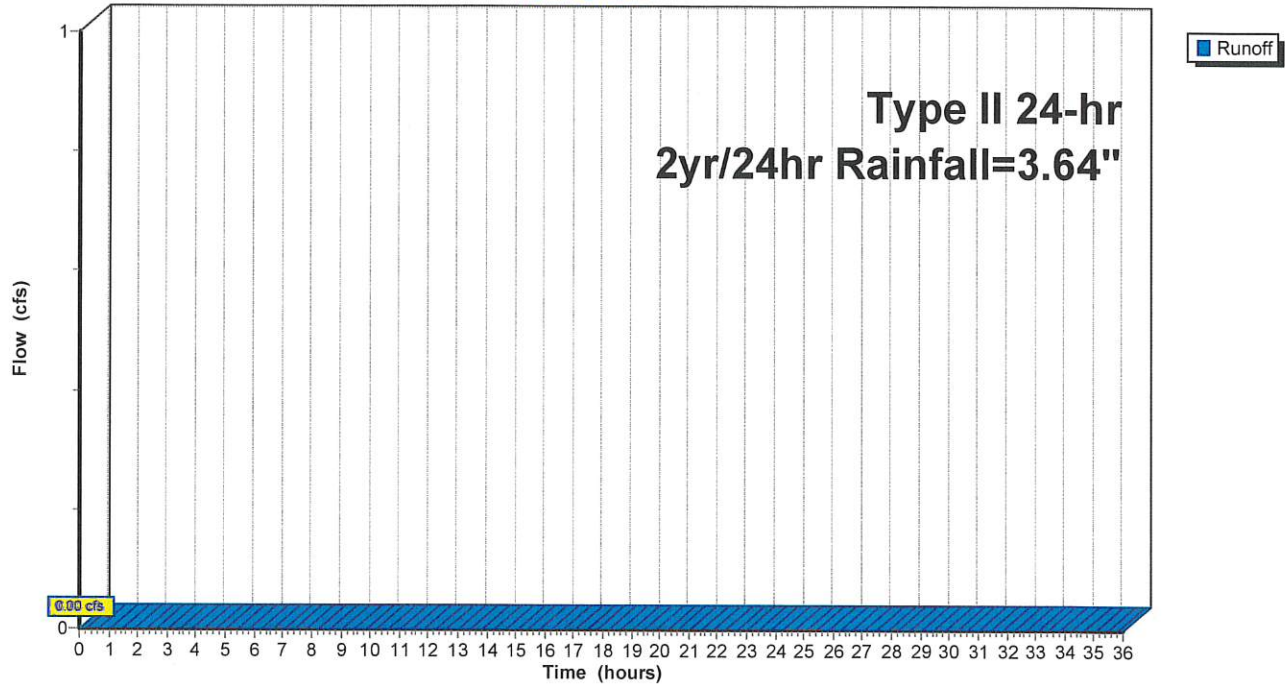
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 5

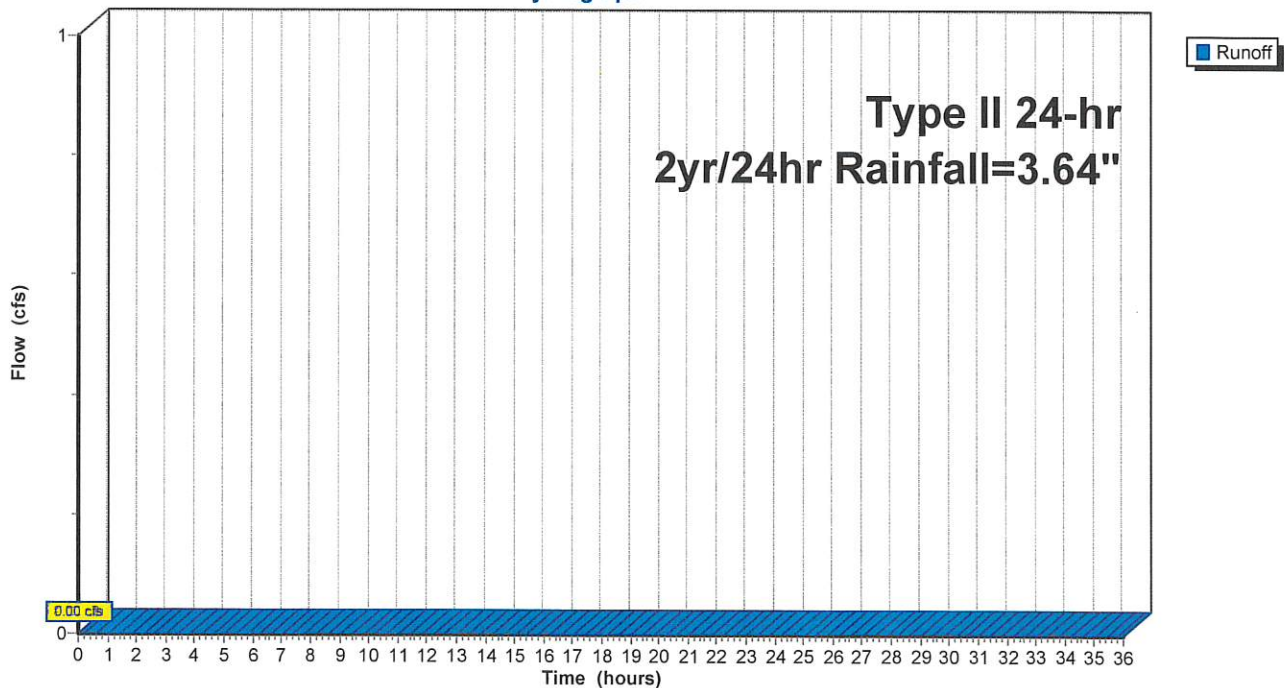
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

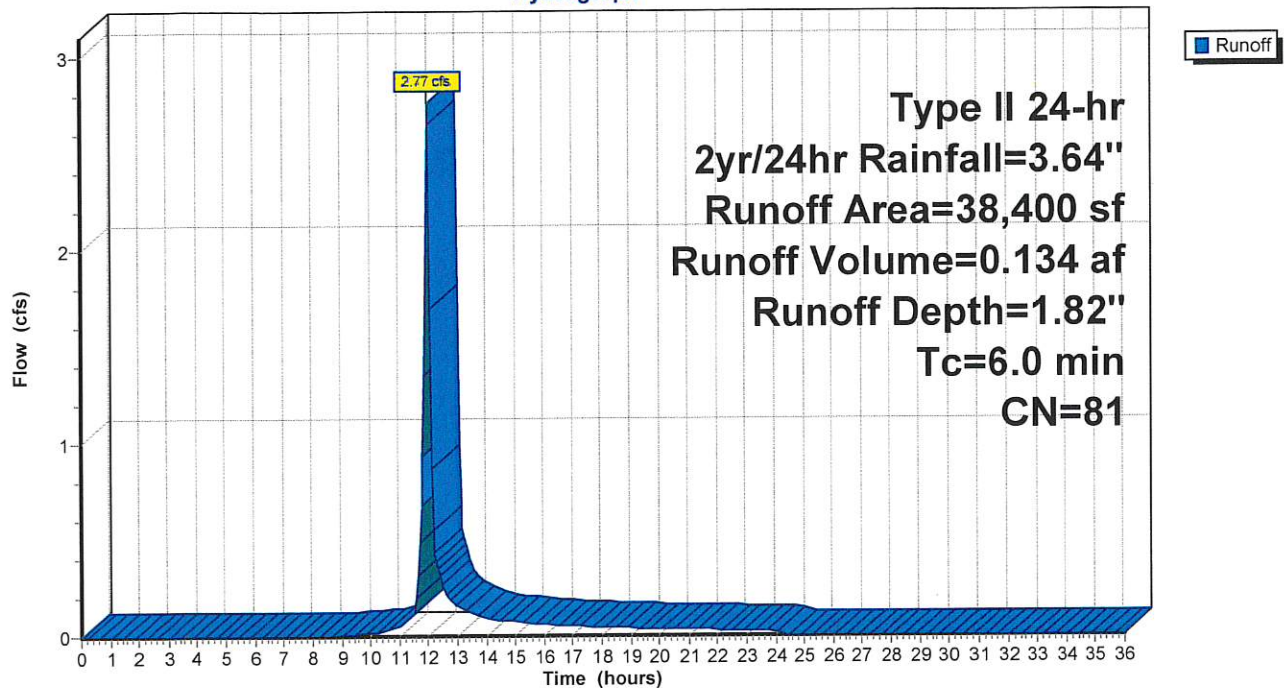
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 6

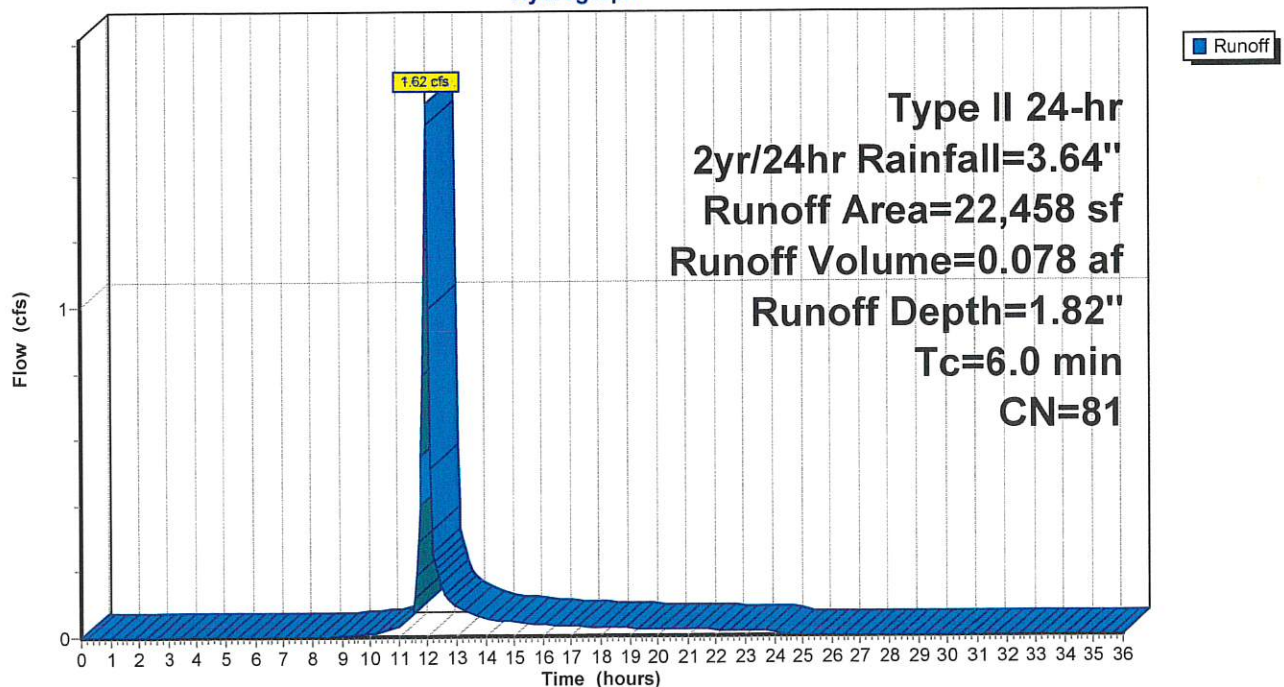
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

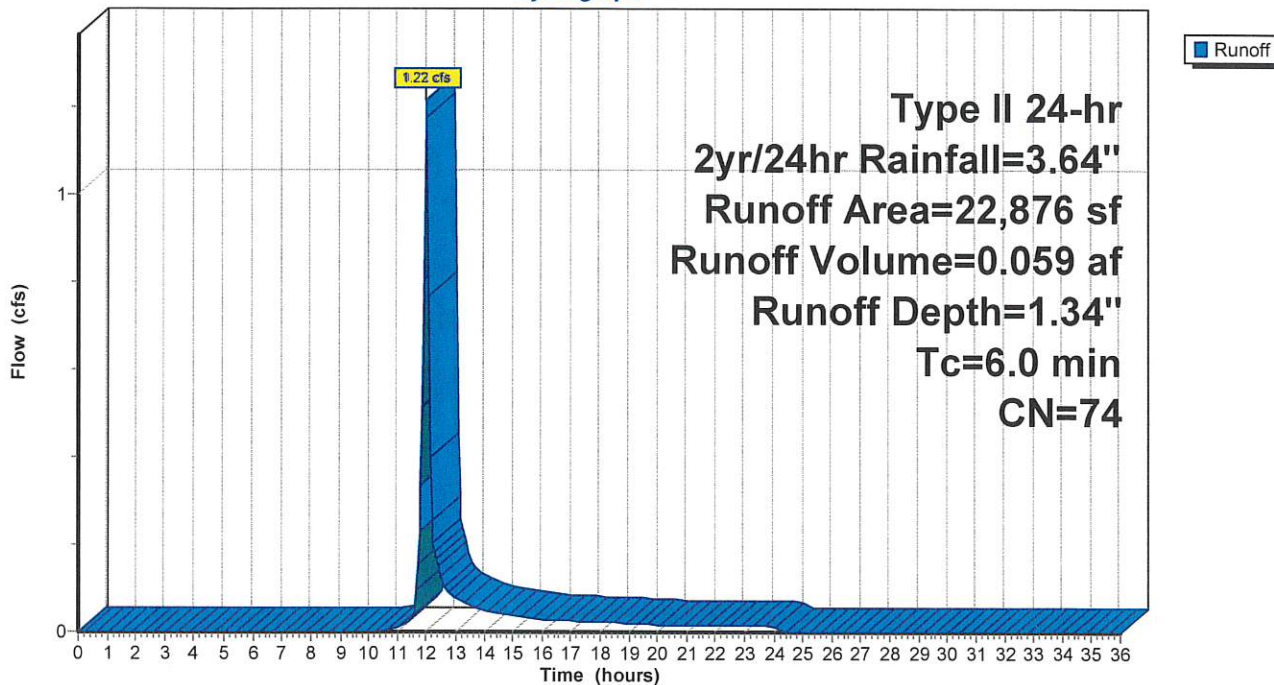
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 7

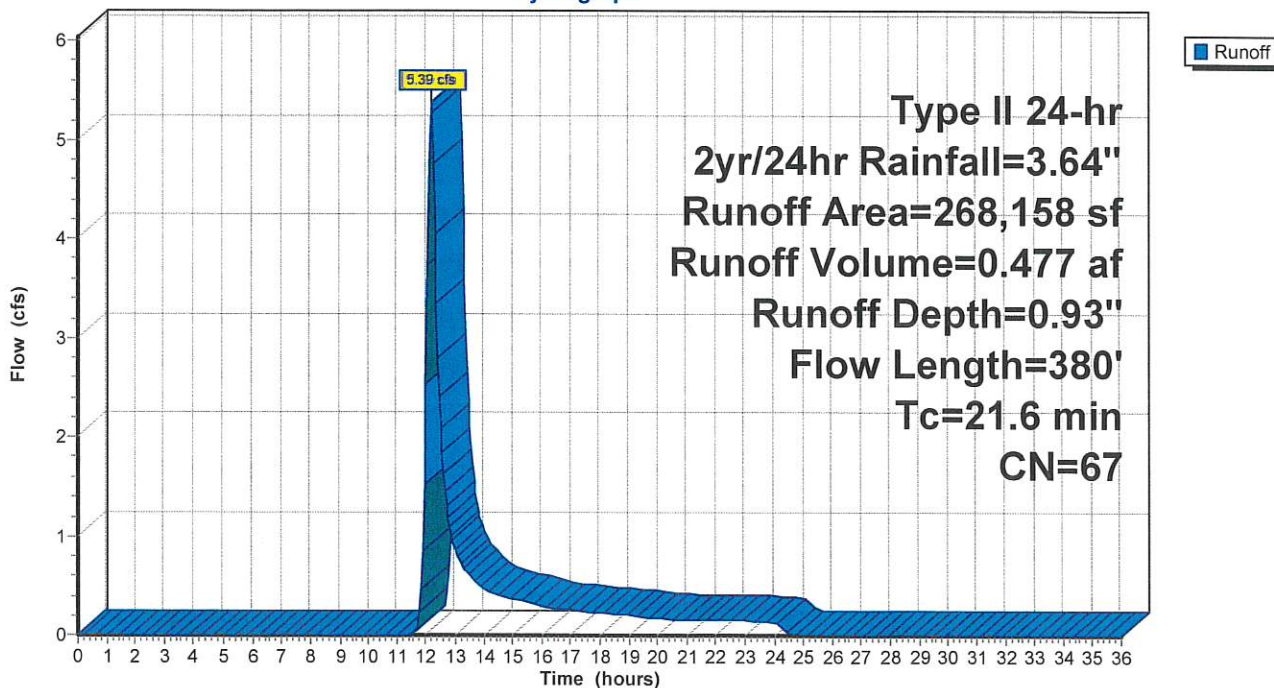
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

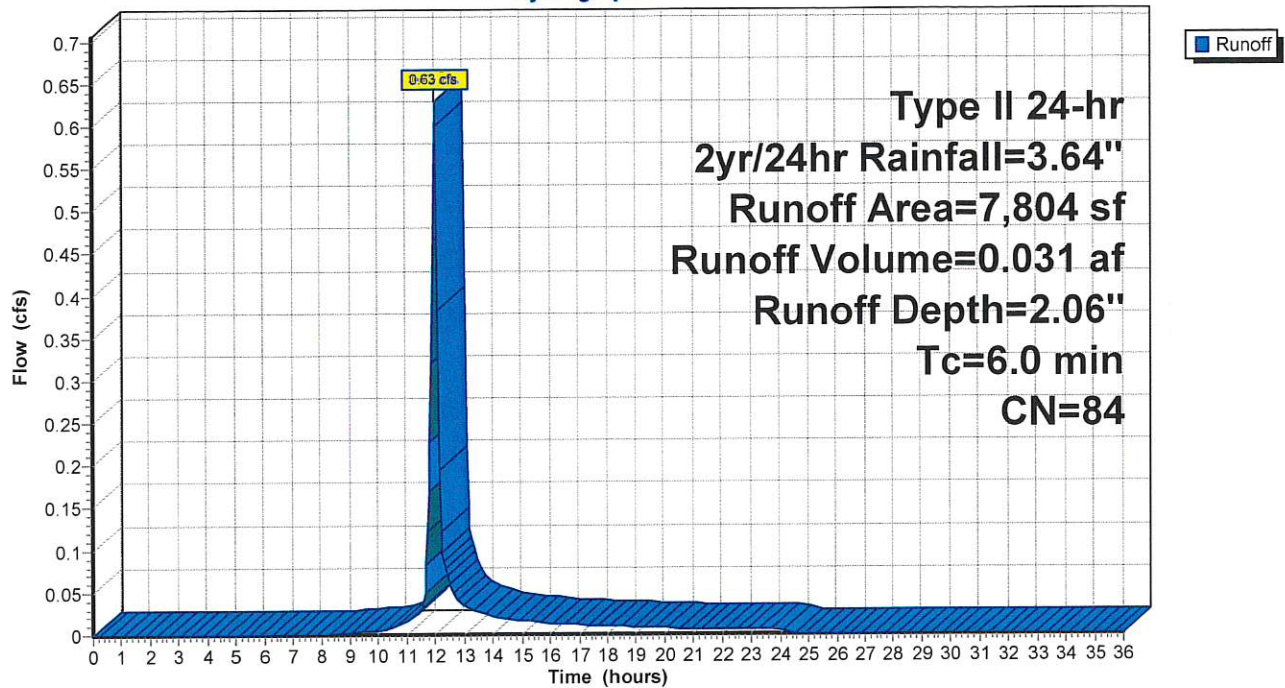
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 8

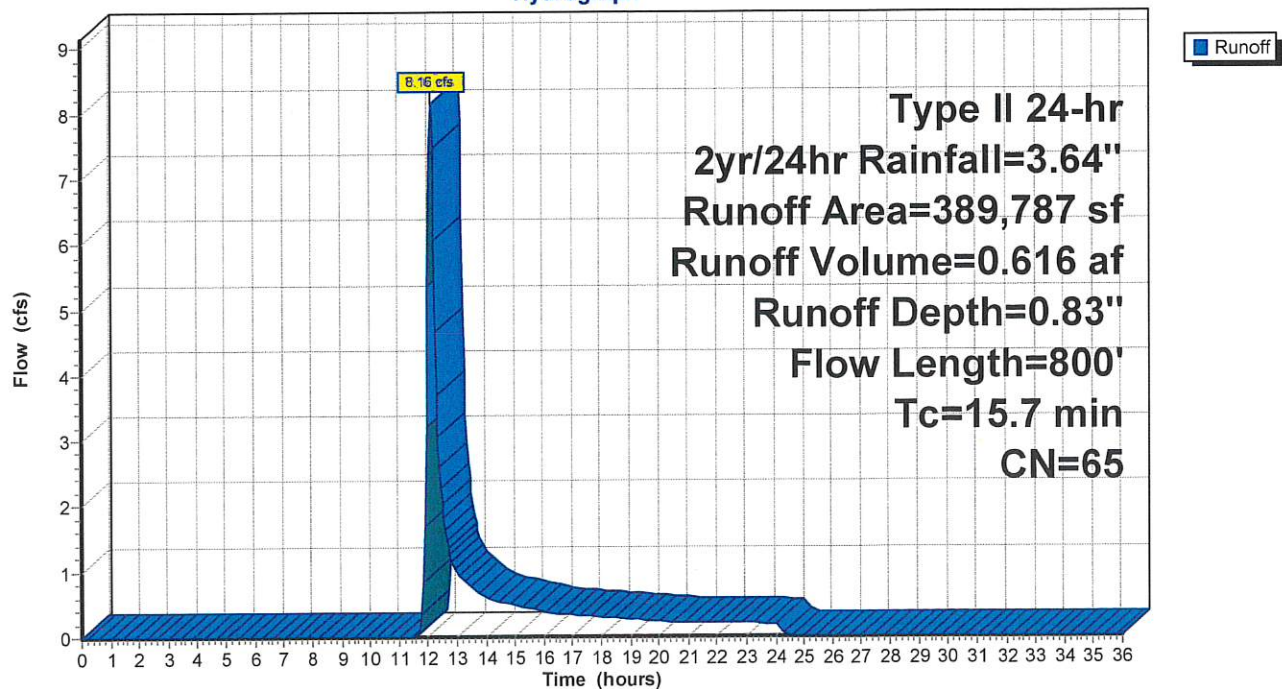
Subcatchment 9S: To Trench Drain

Hydrograph



Subcatchment OS: To Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

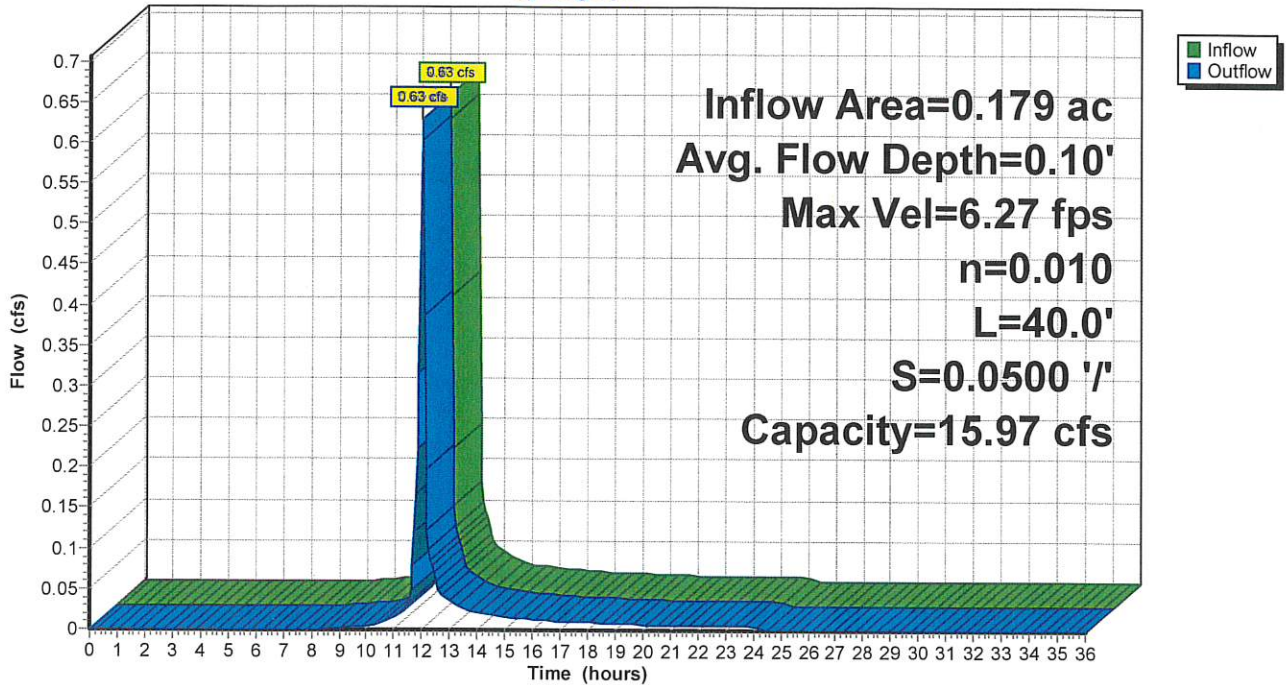
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 9

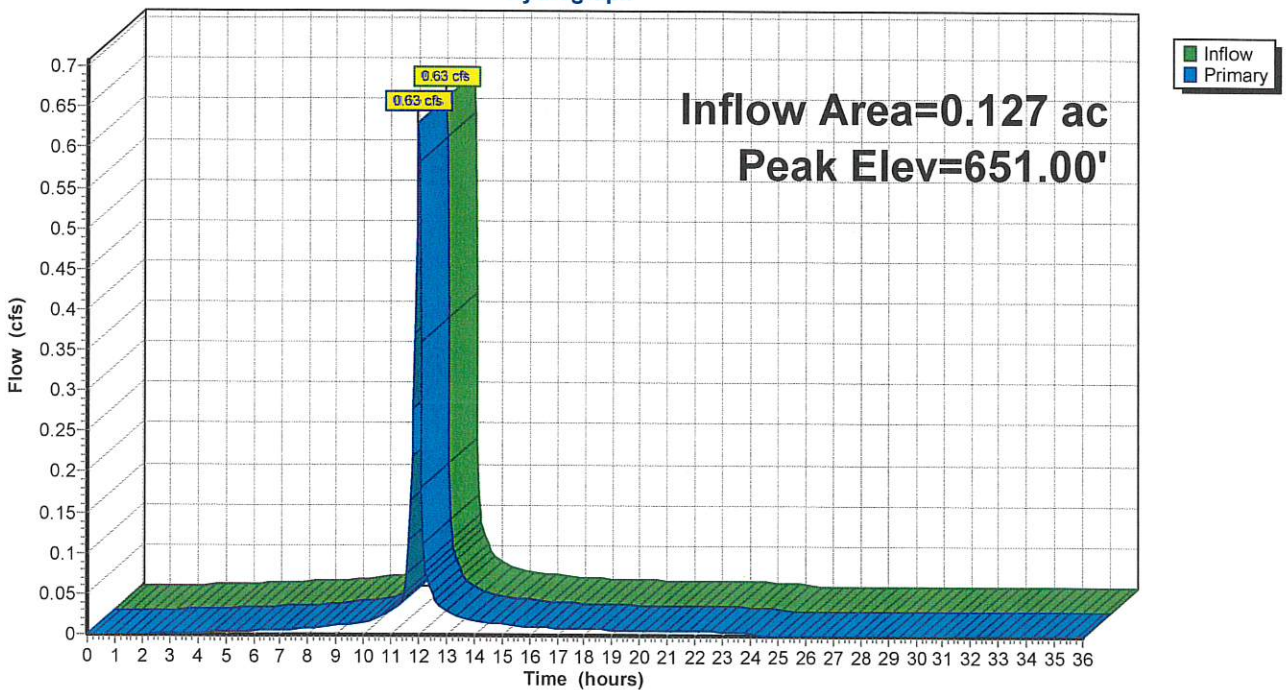
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

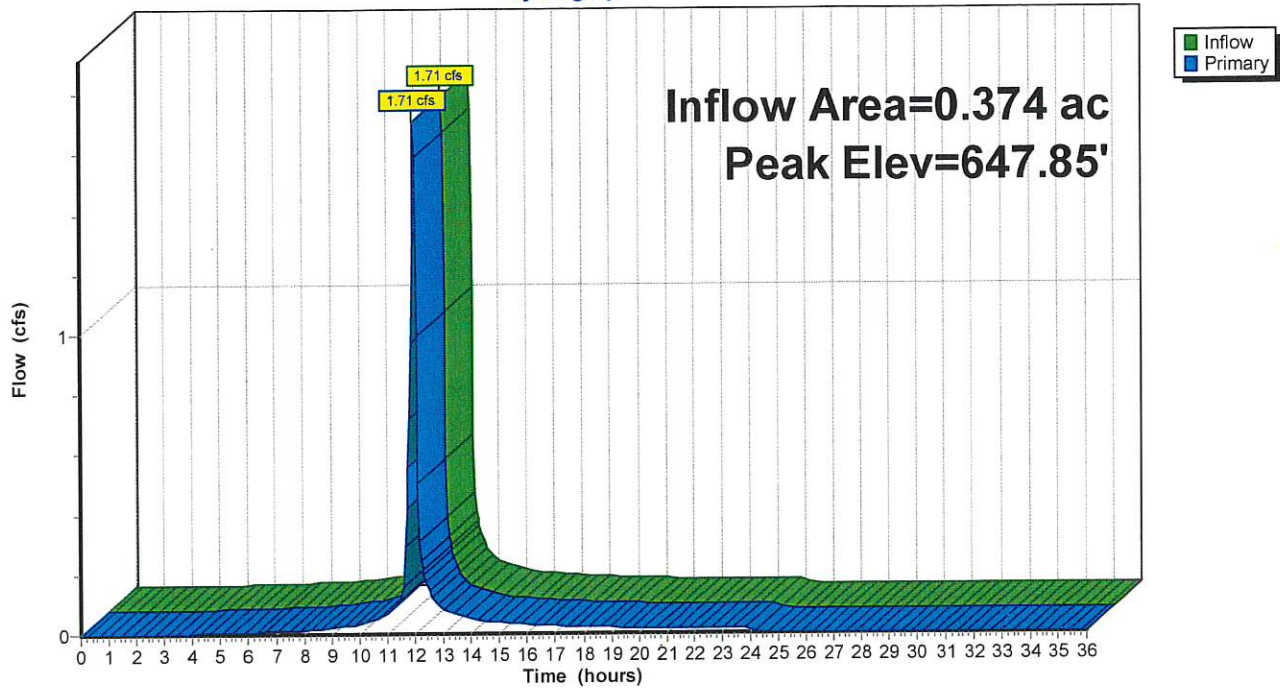
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 10

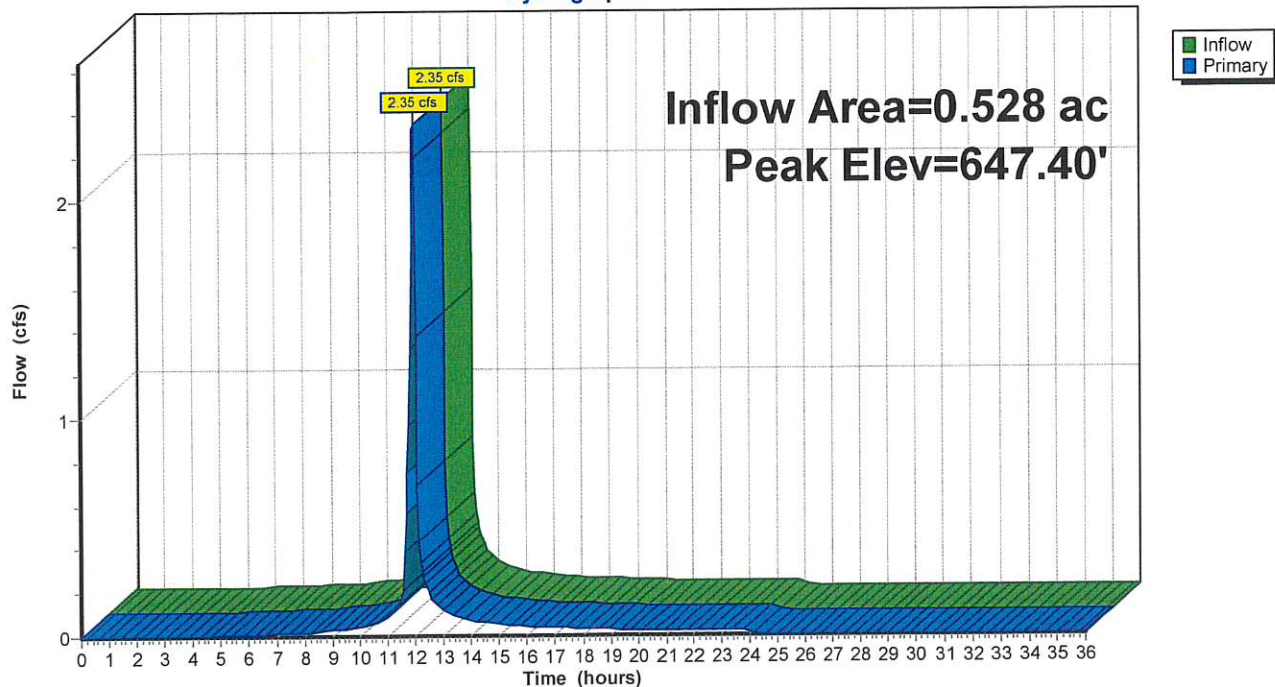
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

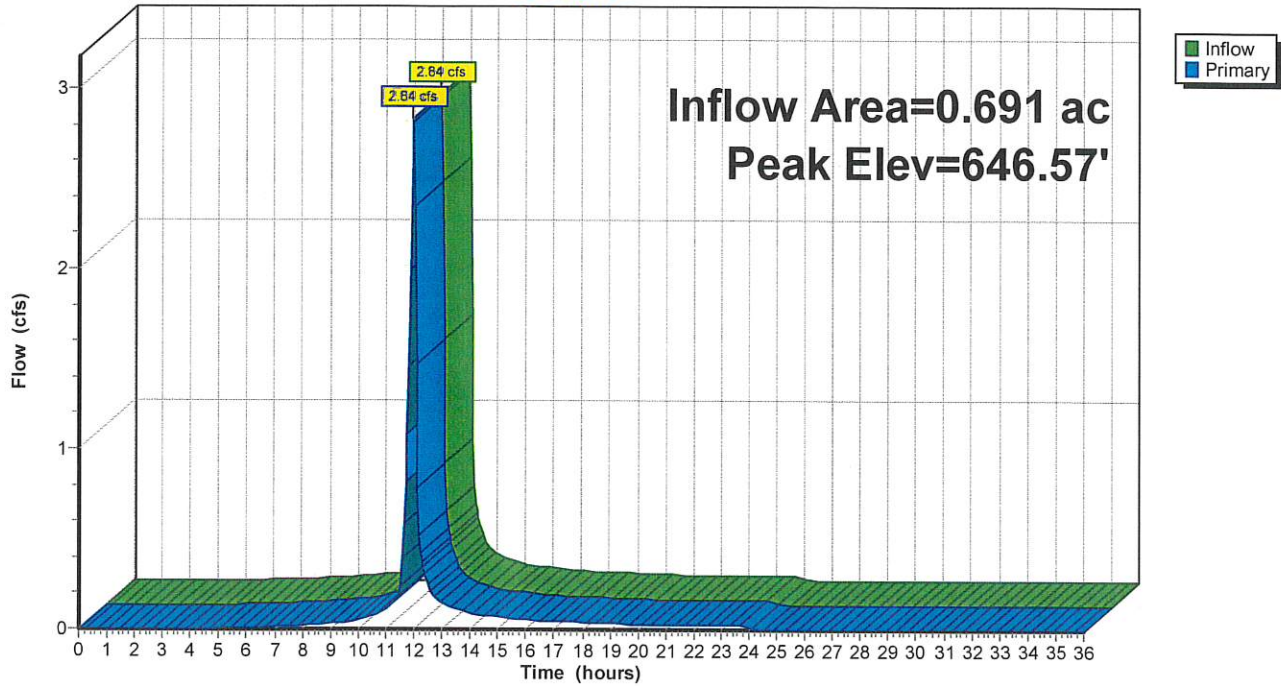
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 11

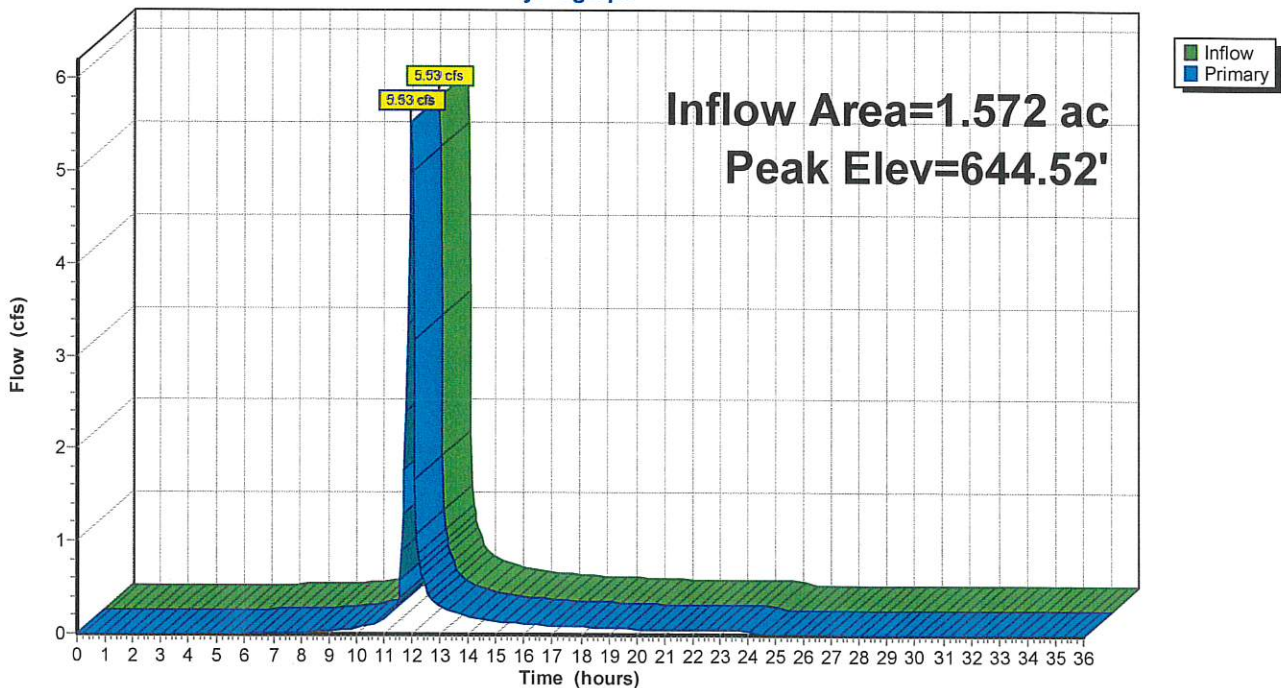
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

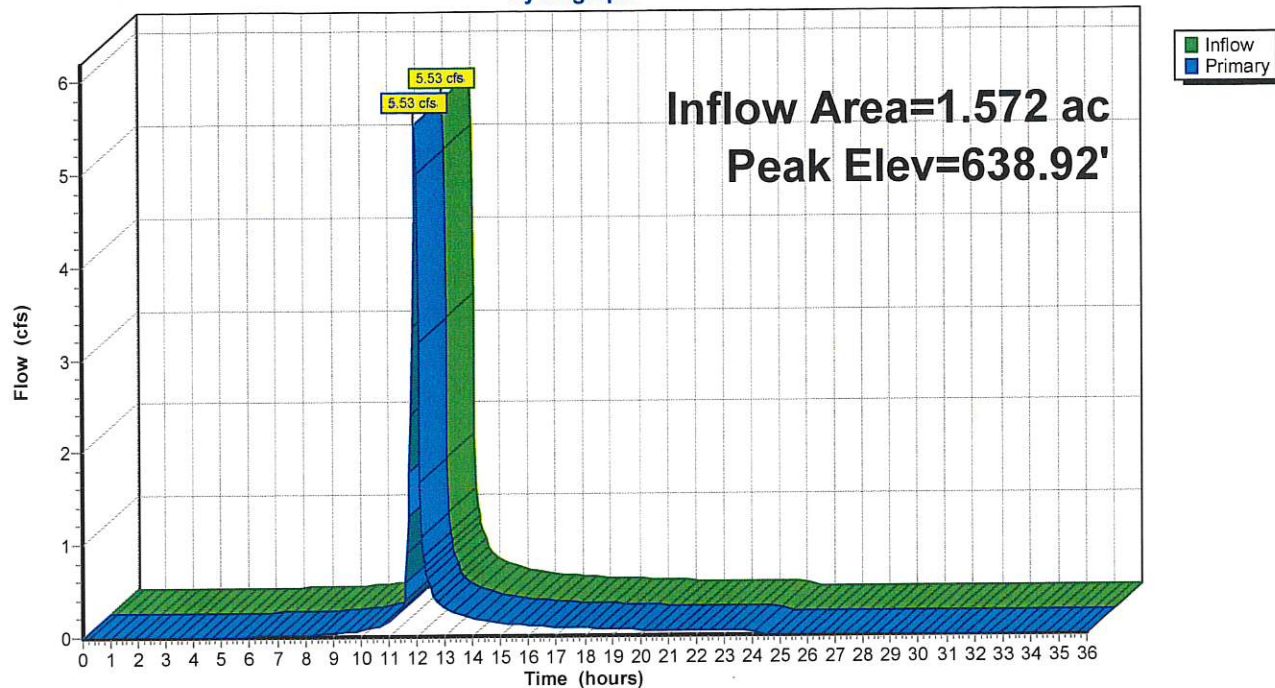
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 12

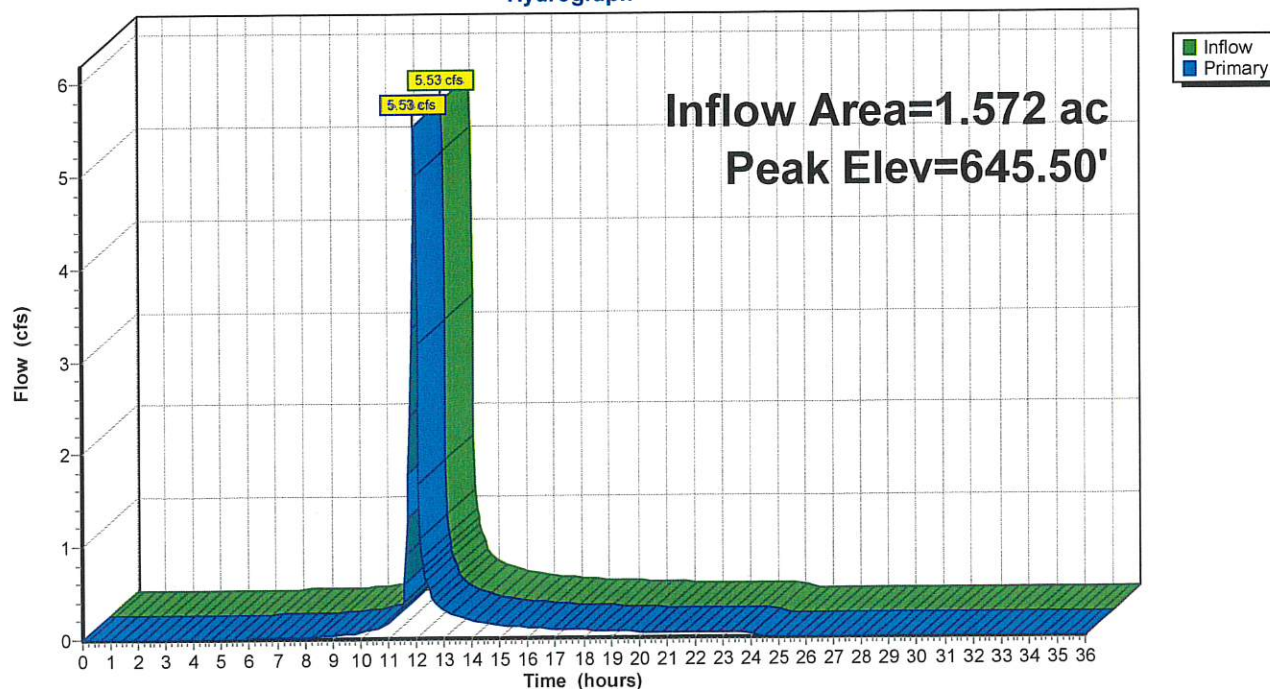
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

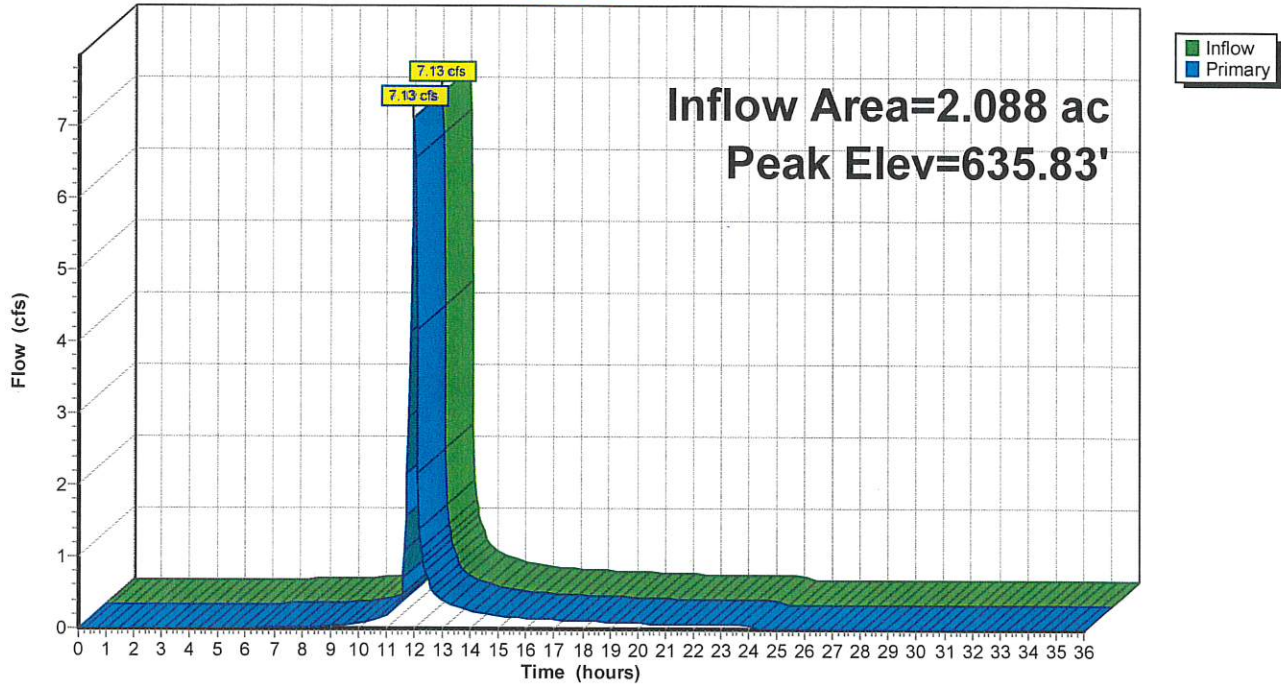
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 13

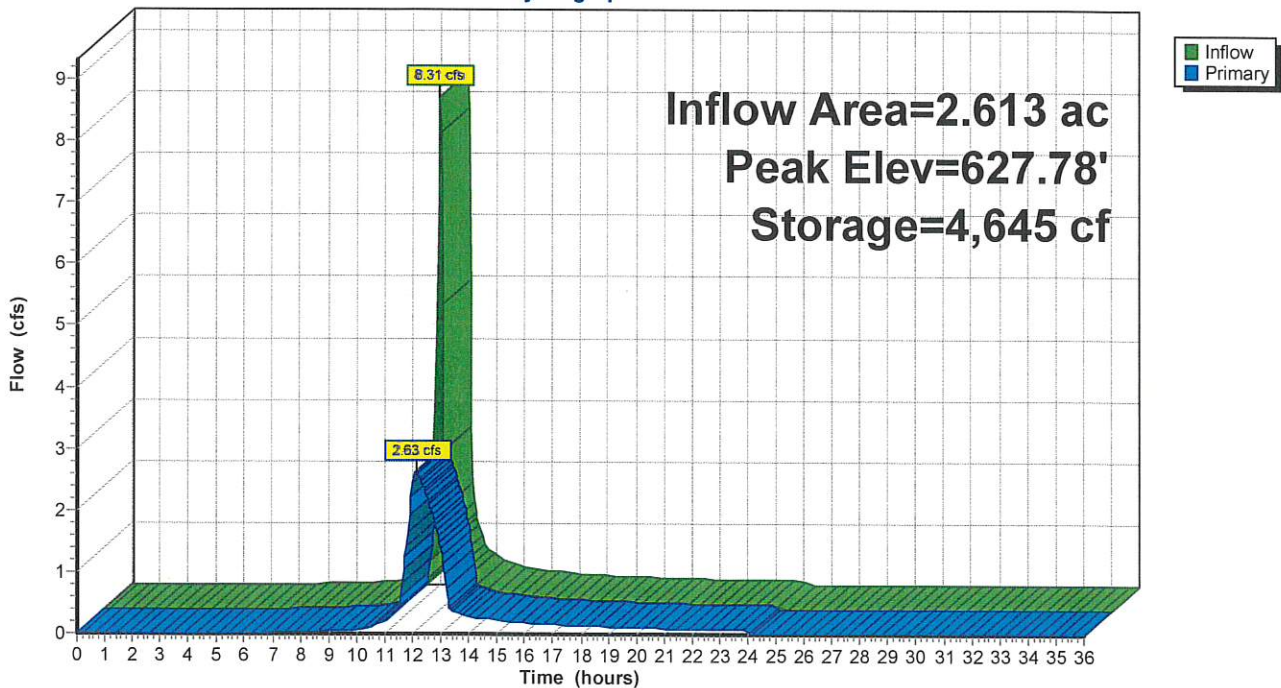
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

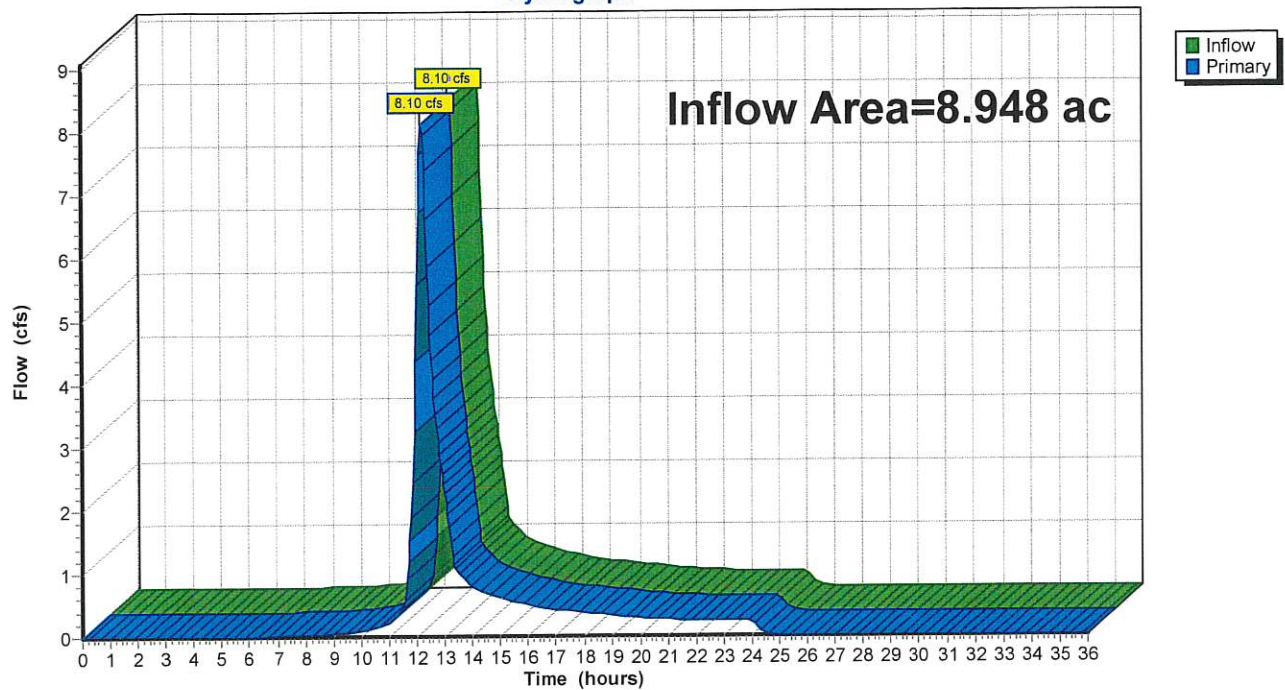
Brookhollow Senior Apartments
Type II 24-hr 2yr/24hr Rainfall=3.64"

Printed 9/13/2023

Page 14

Link 16L: Site Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

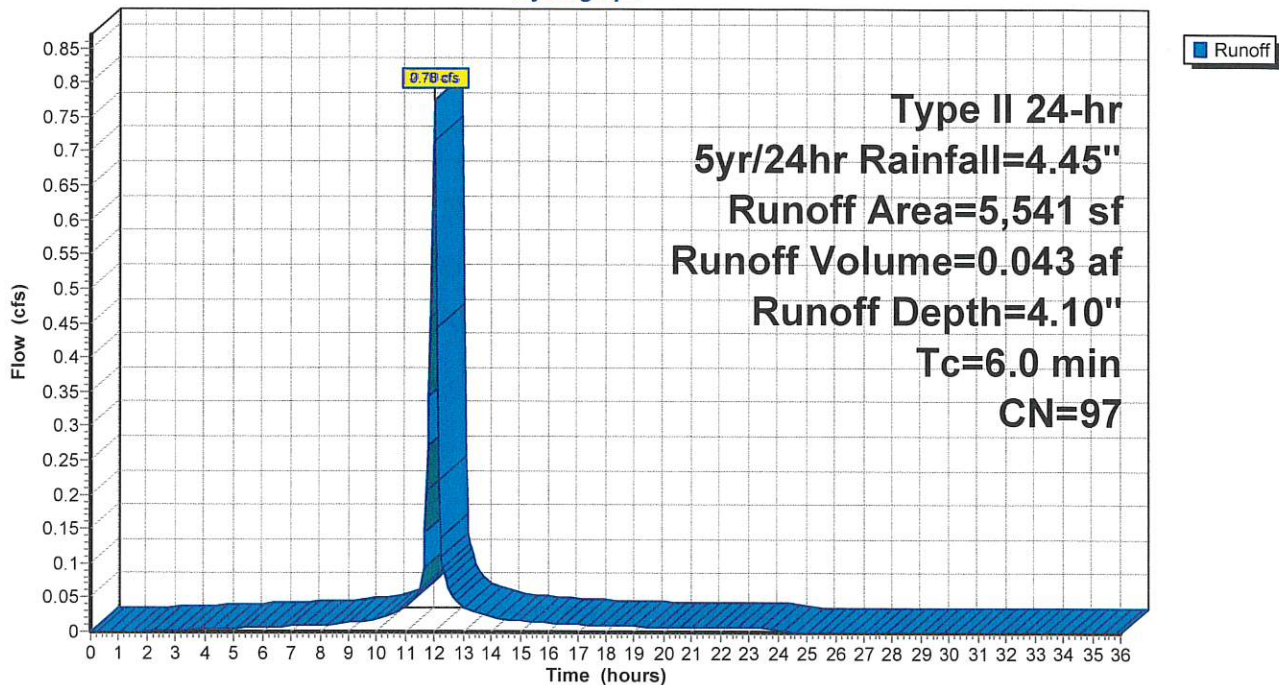
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 15

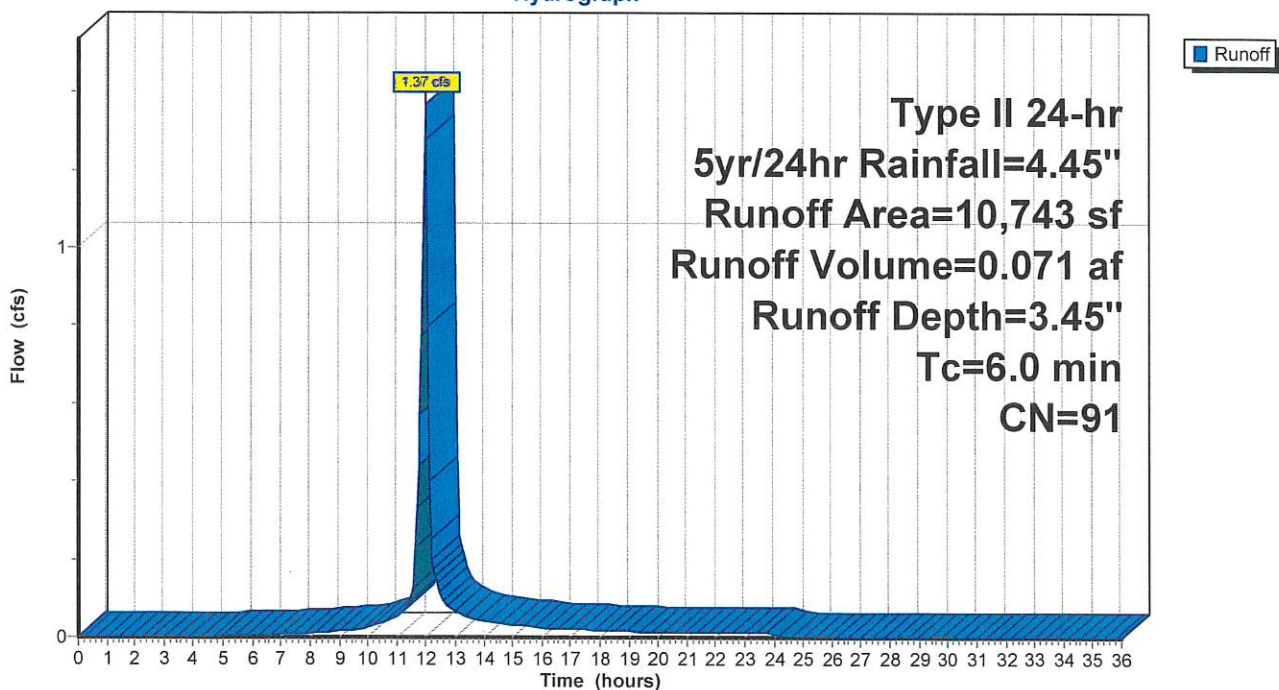
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

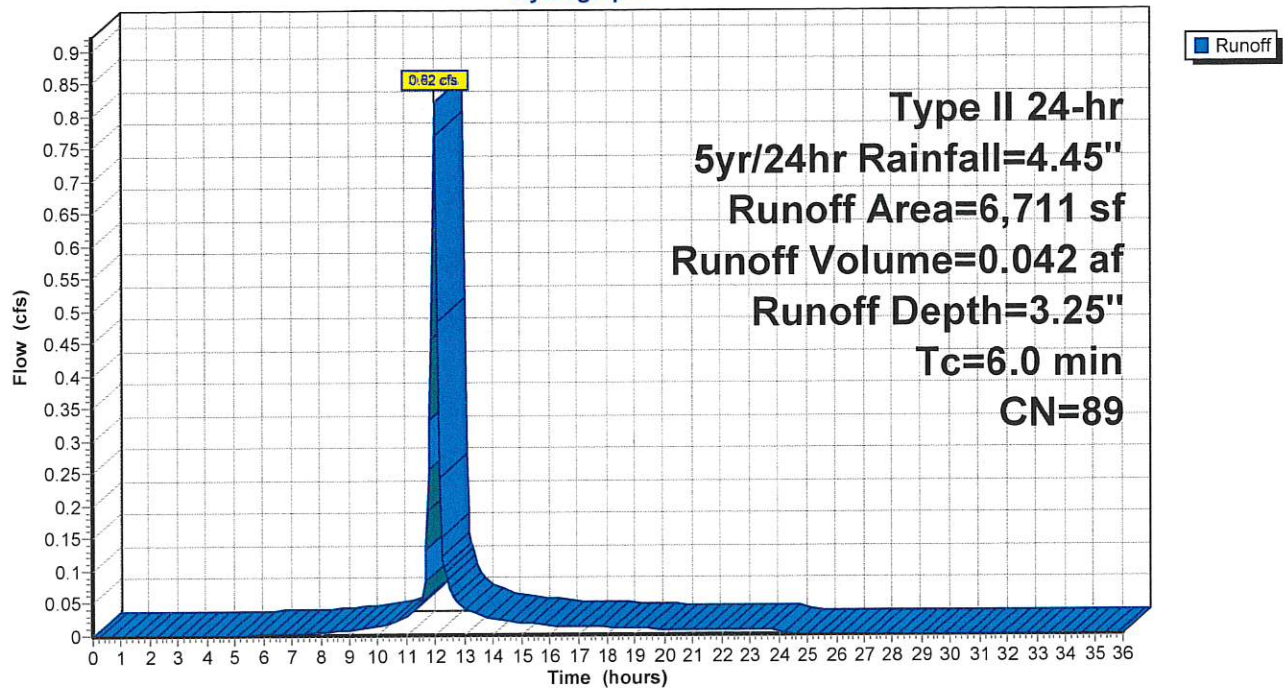
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 16

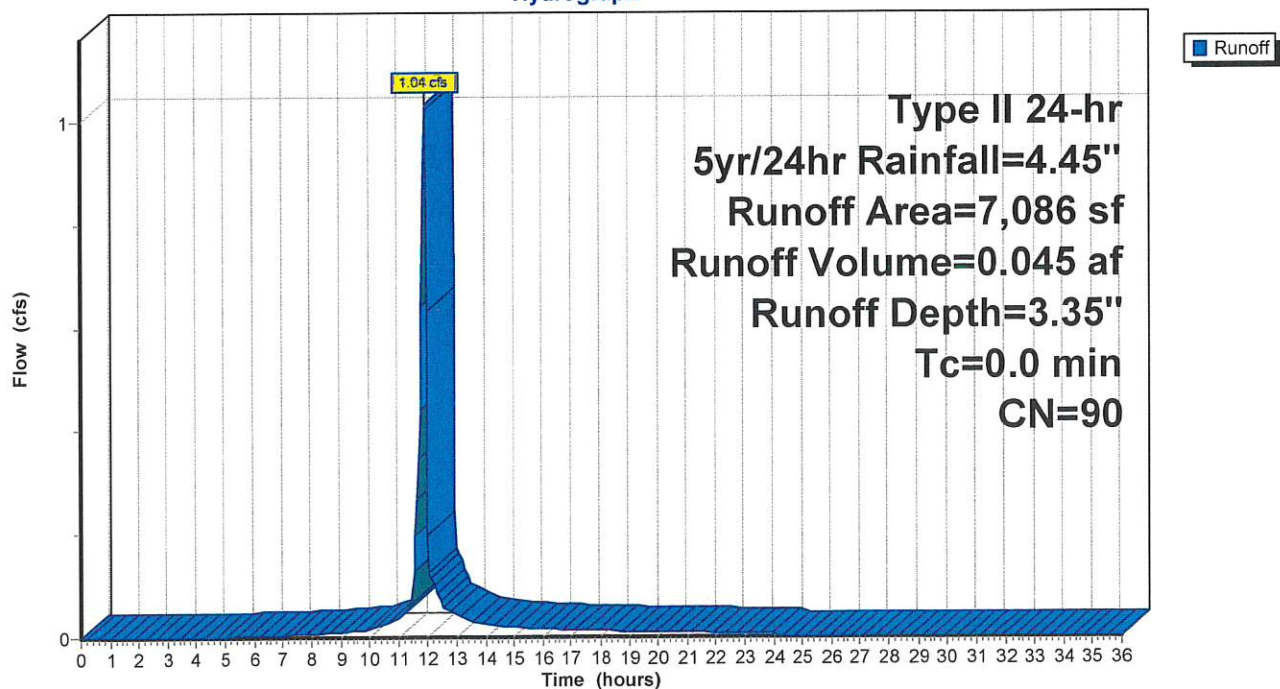
Subcatchment 3S: To CB3

Hydrograph



Subcatchment 4S: To CB4

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

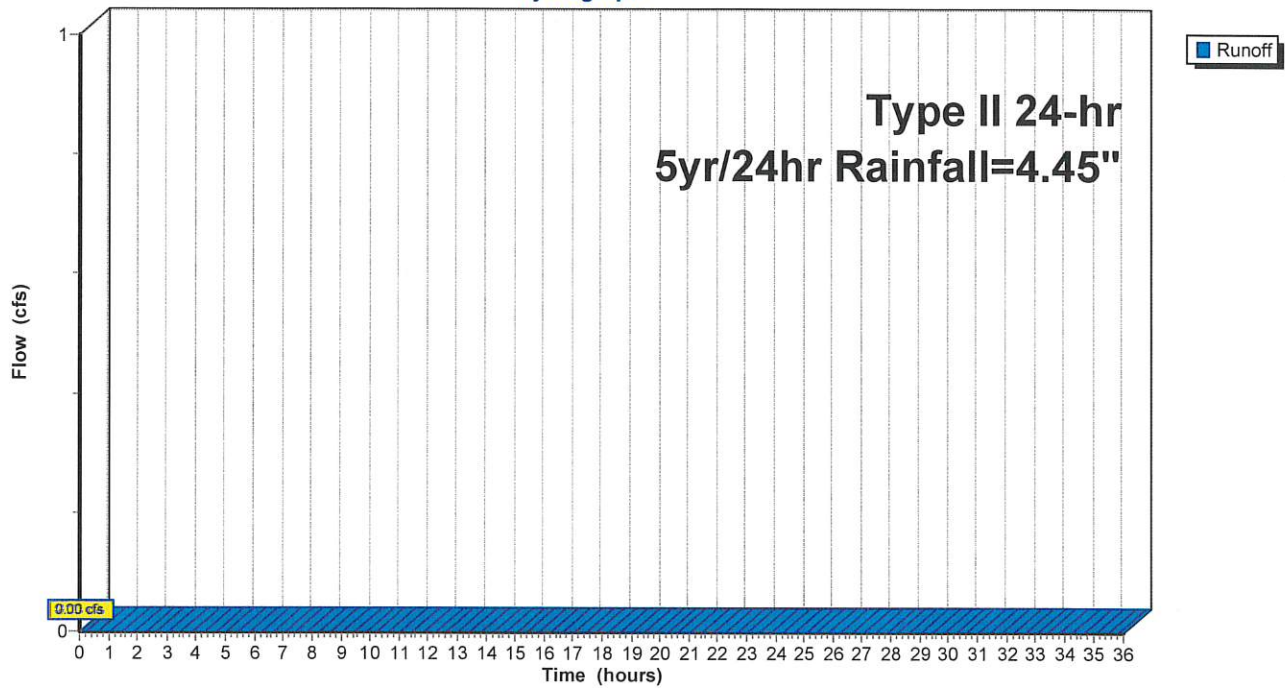
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 17

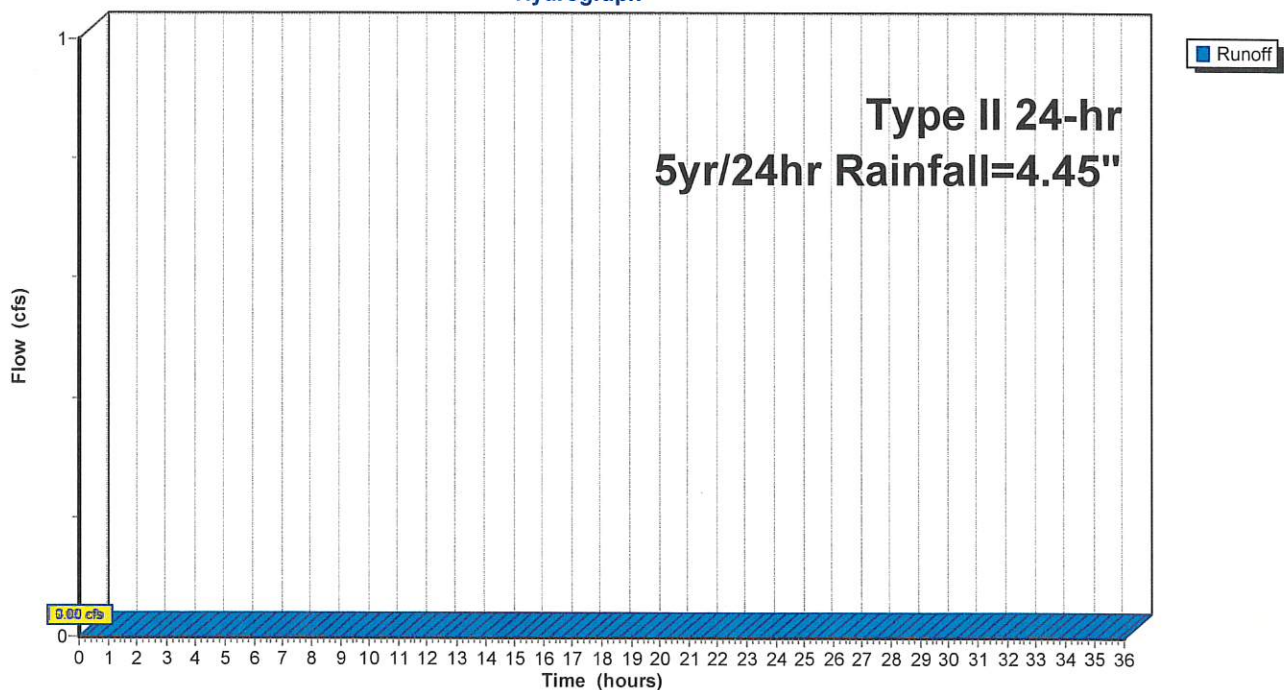
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

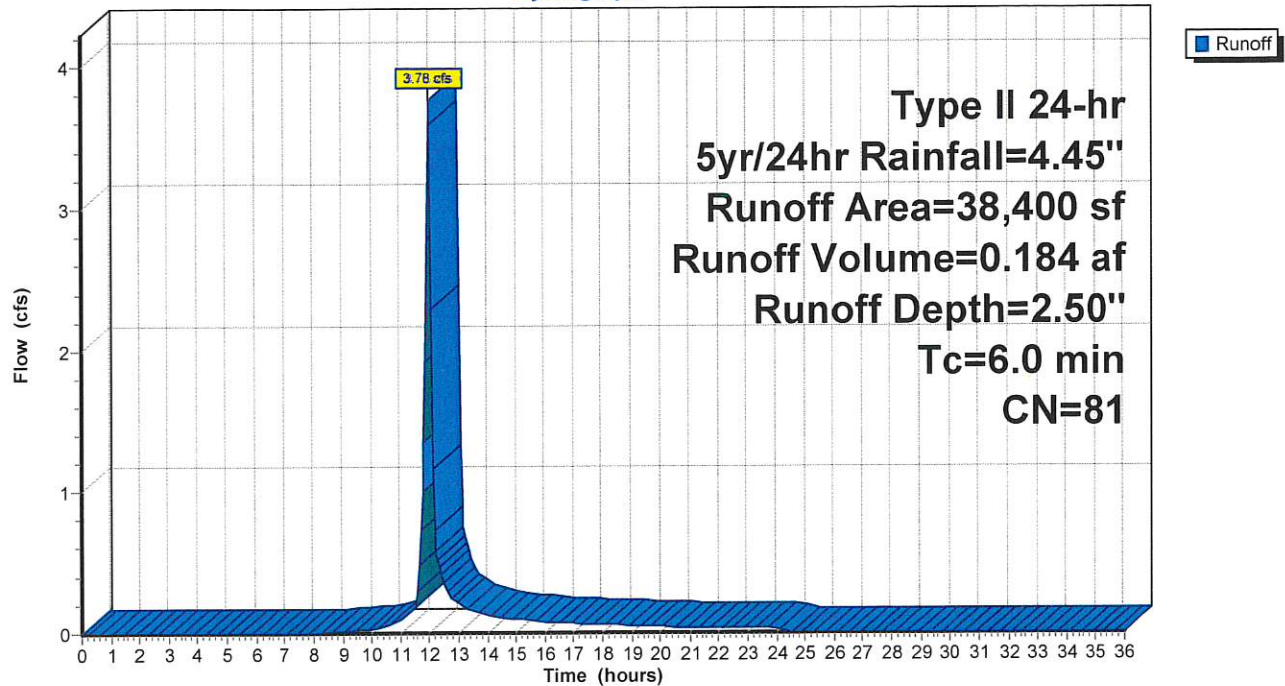
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 18

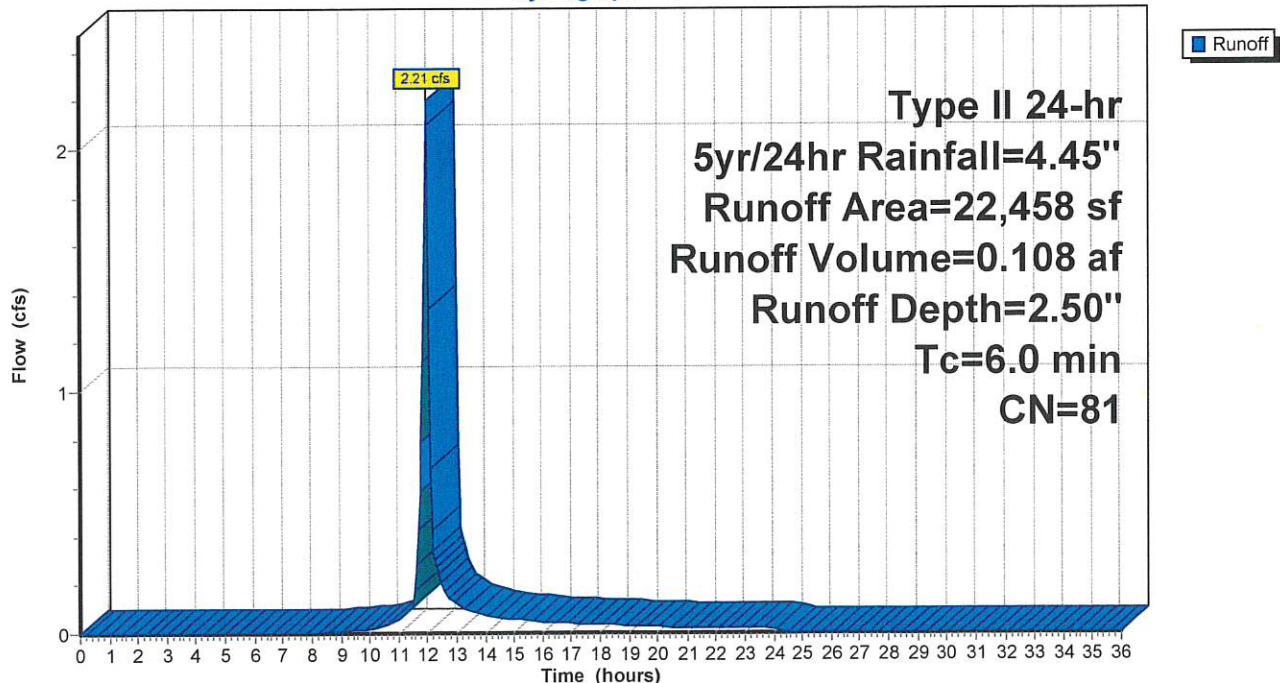
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

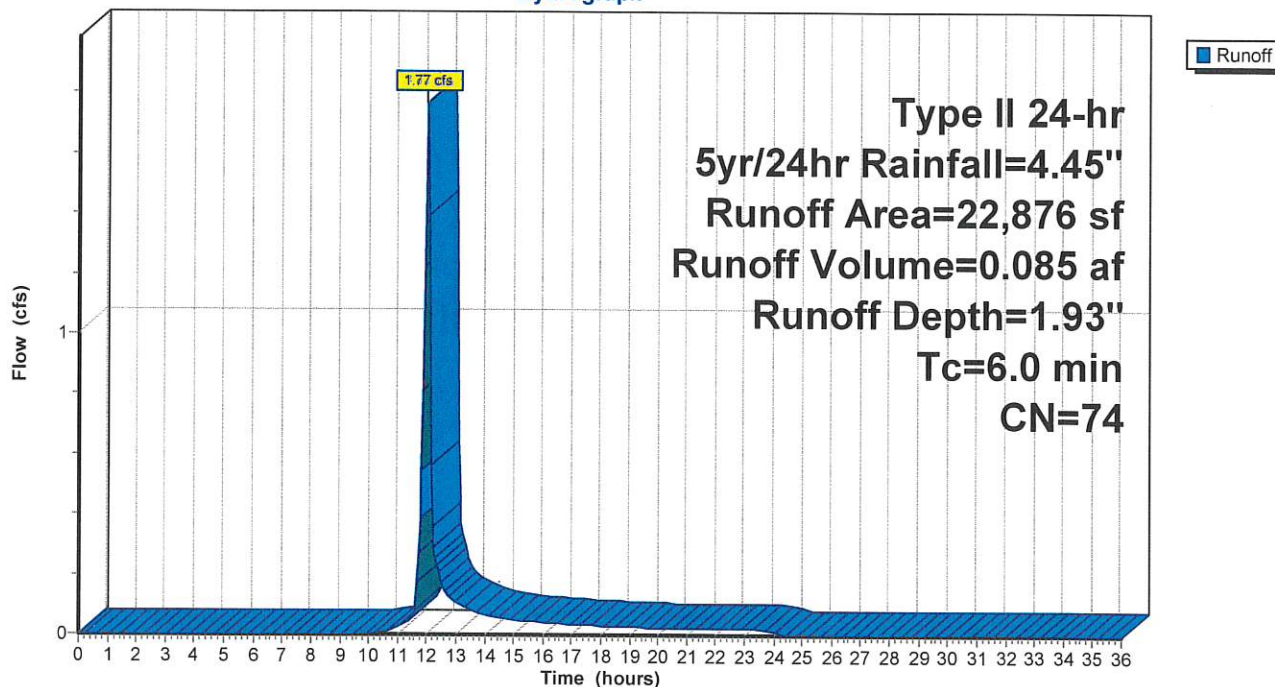
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 19

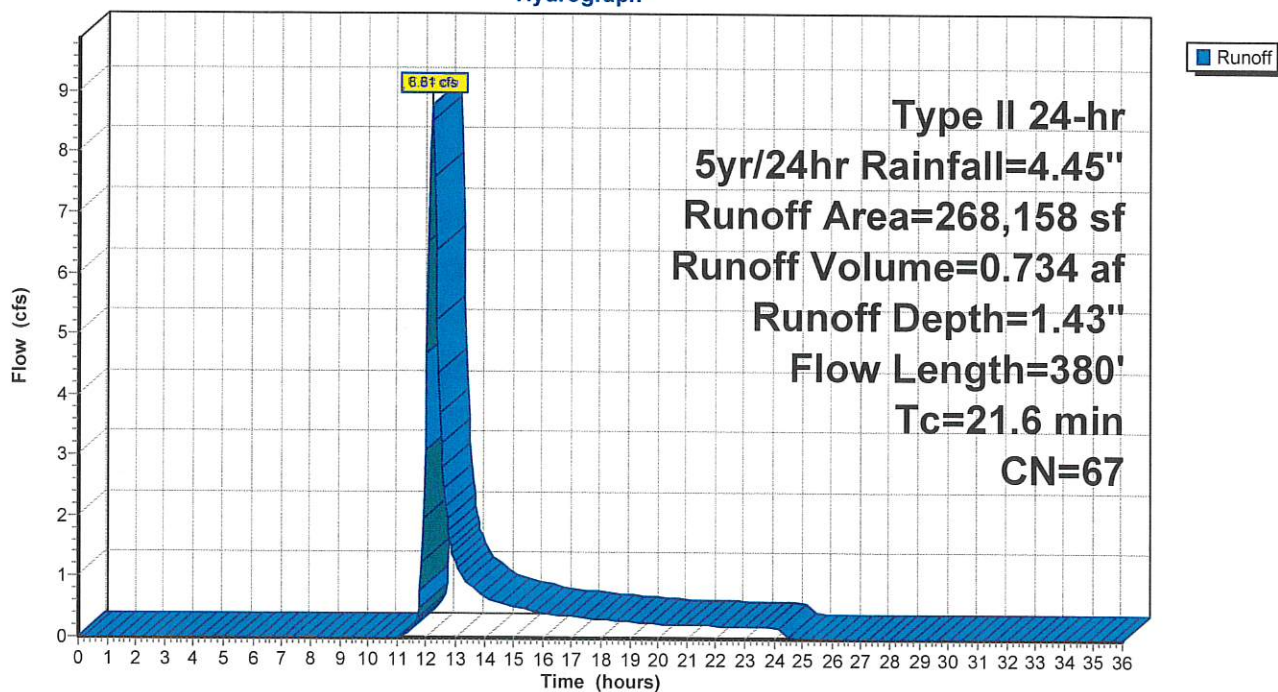
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

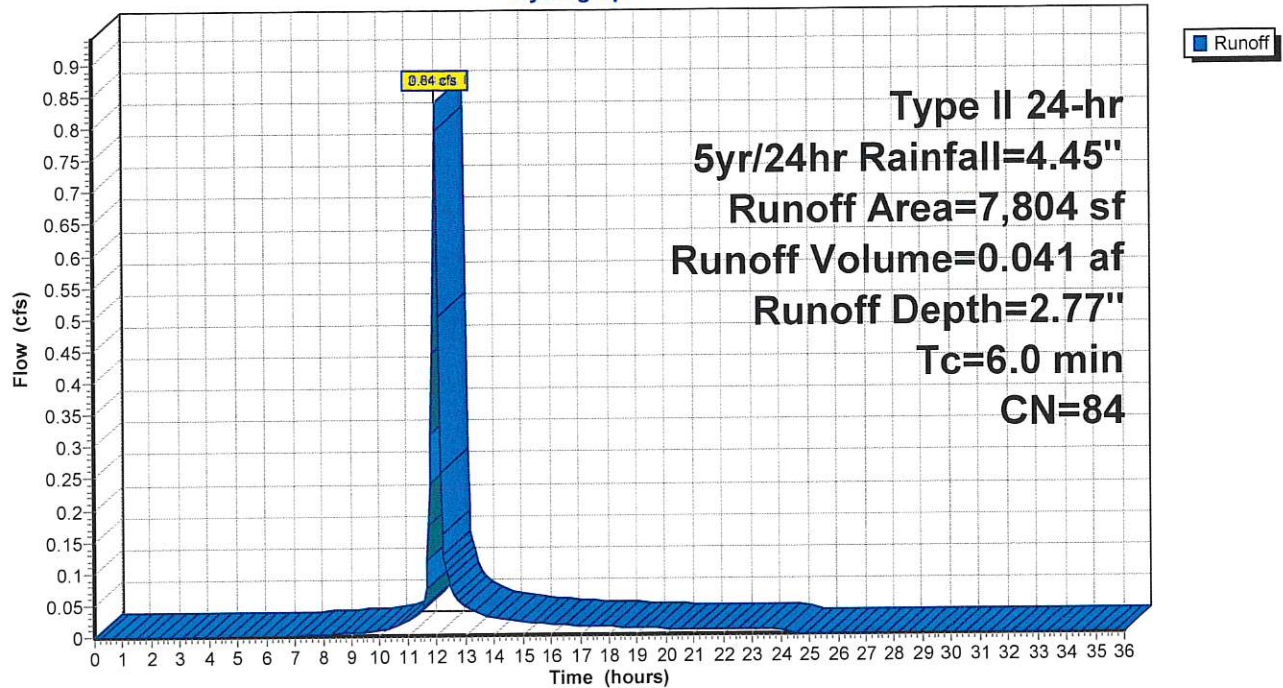
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 20

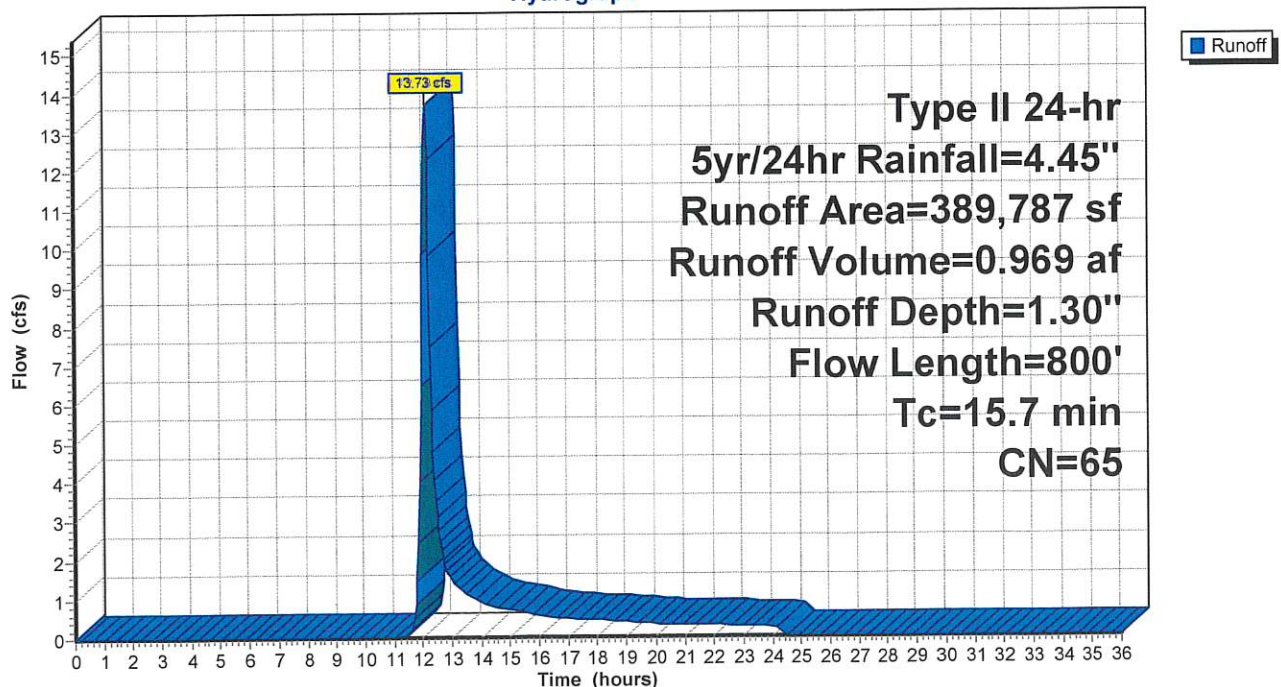
Subcatchment 9S: To Trench Drain

Hydrograph



Subcatchment OS: To Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

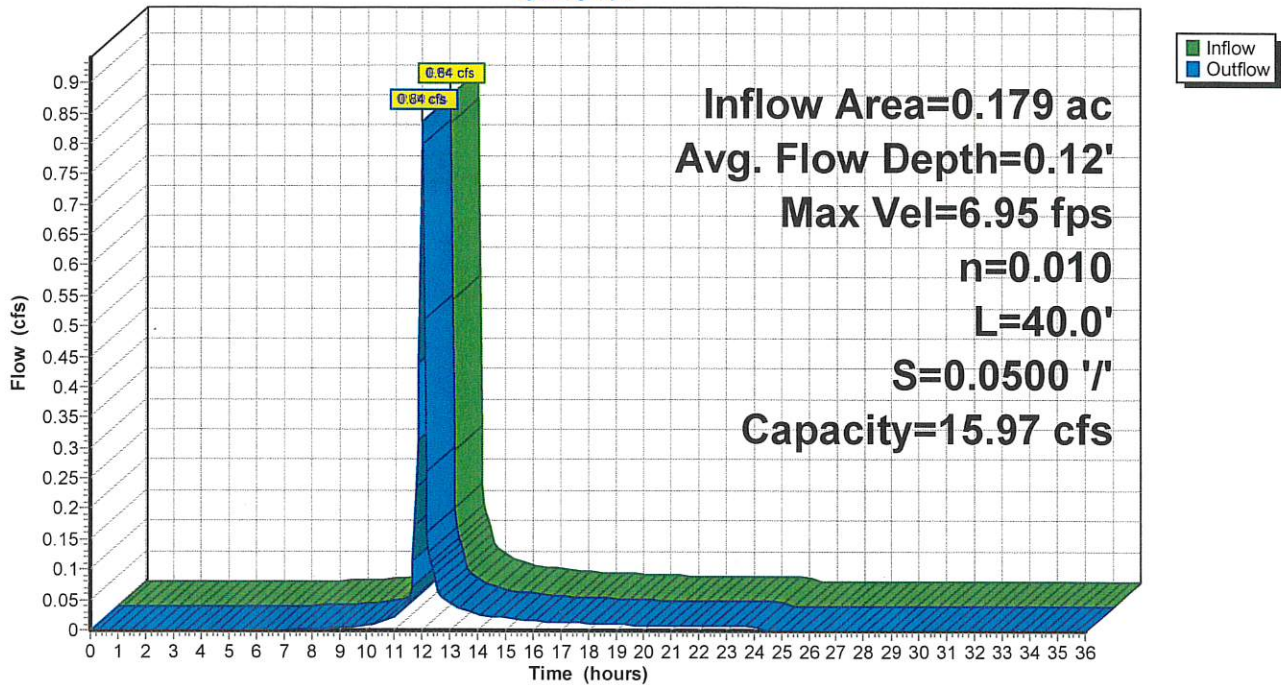
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 21

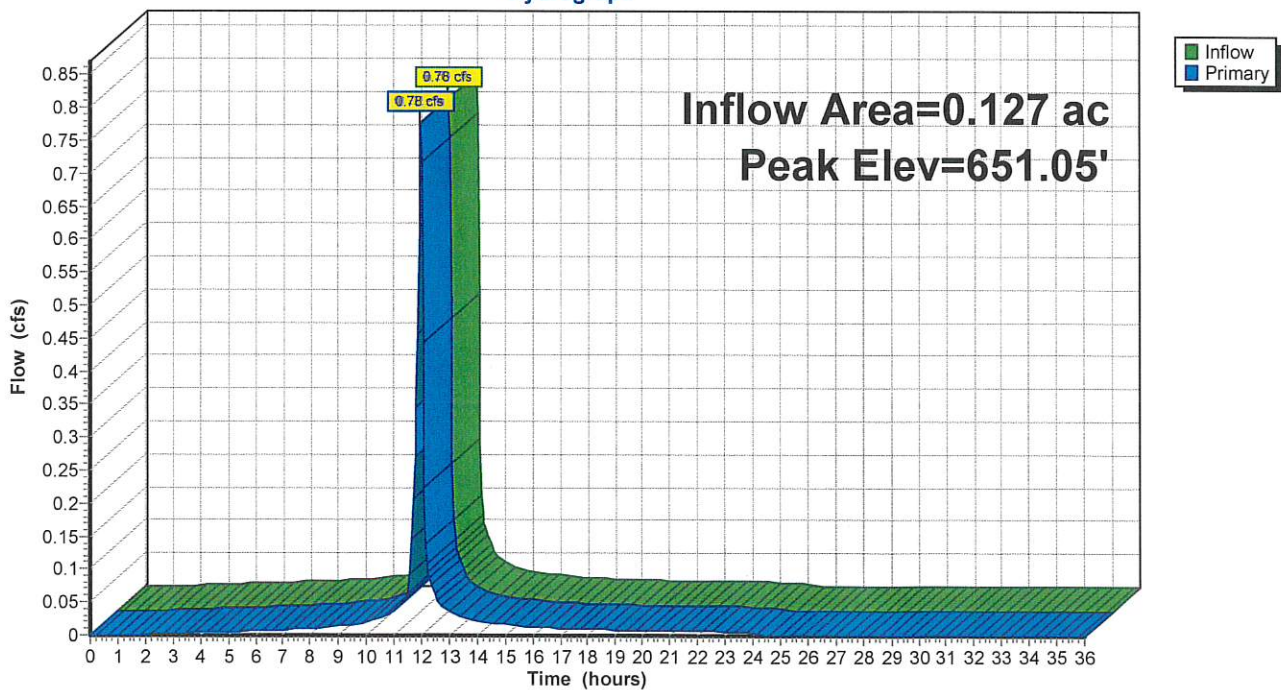
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

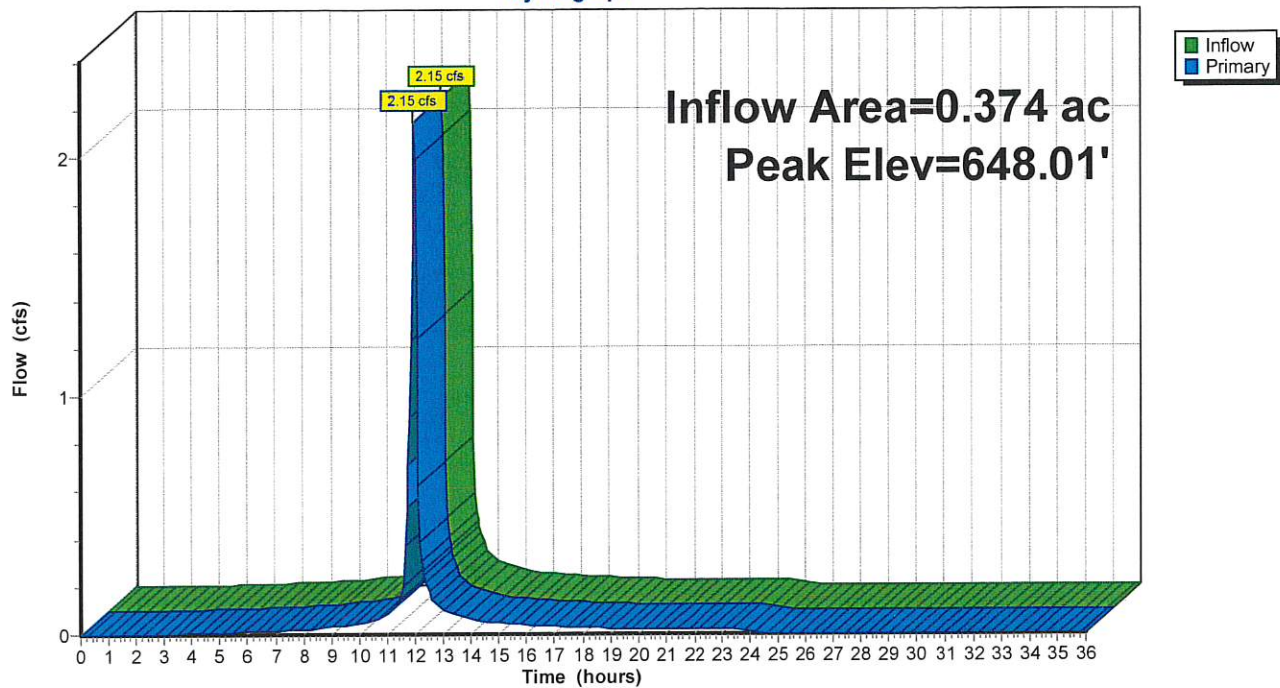
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 22

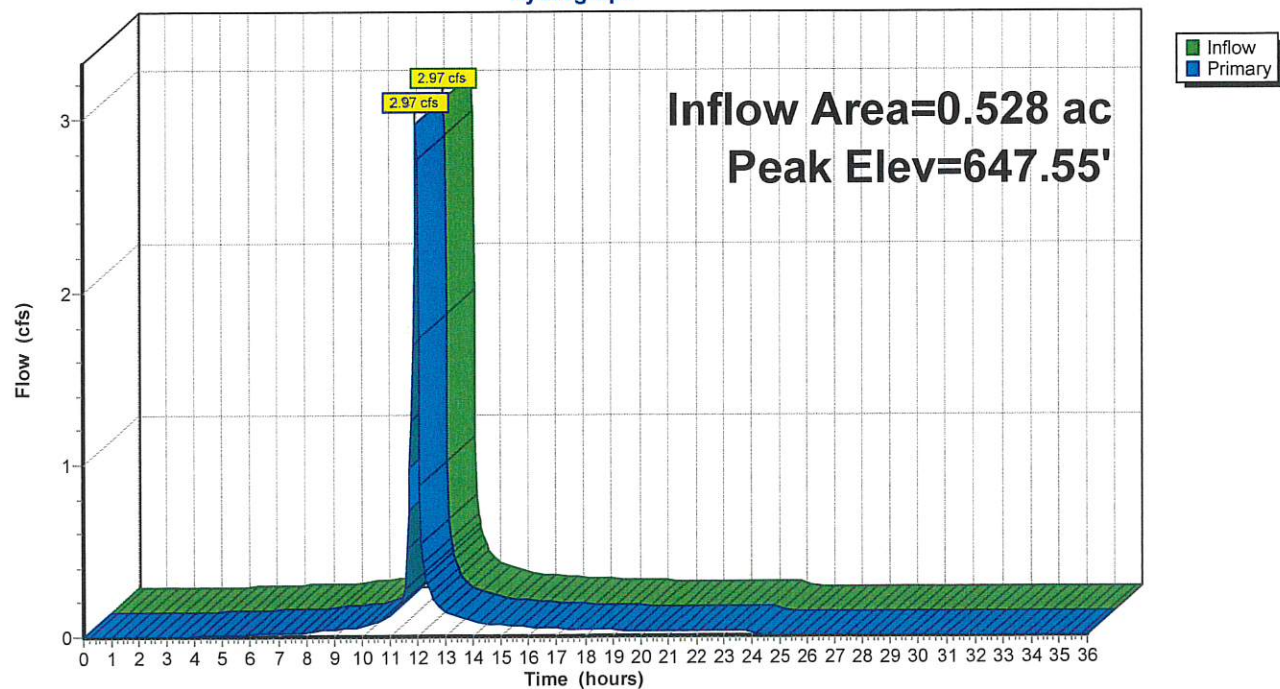
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

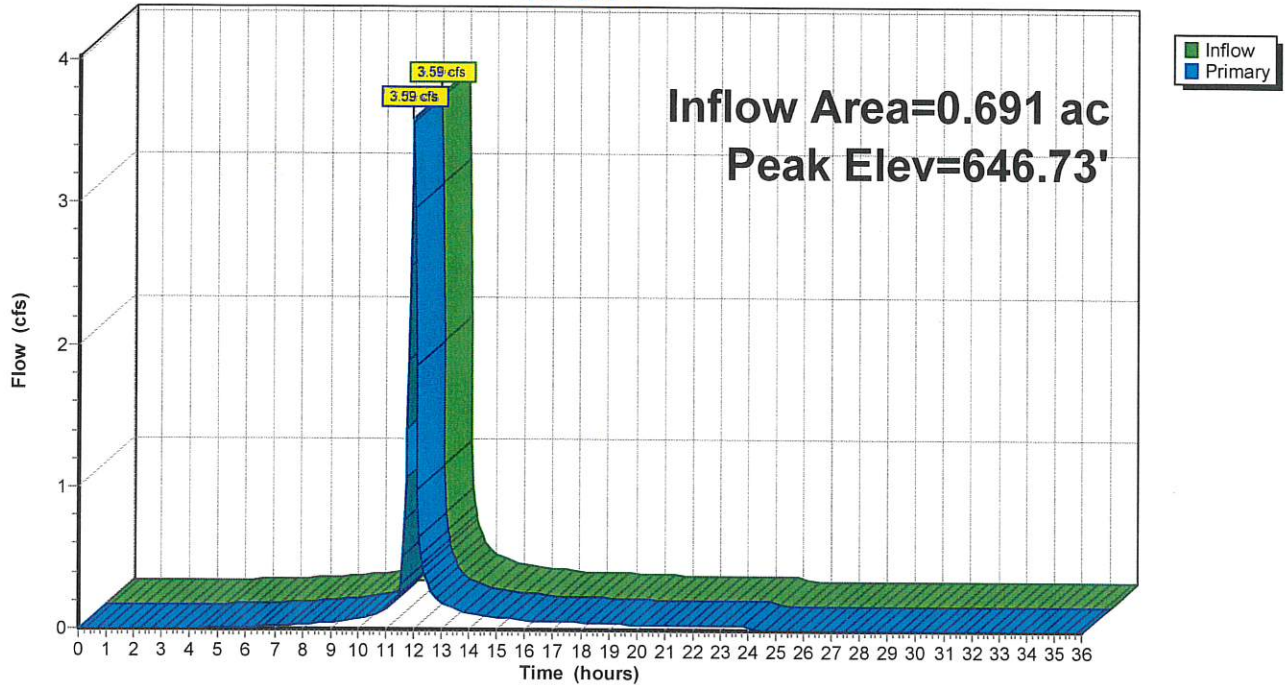
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 23

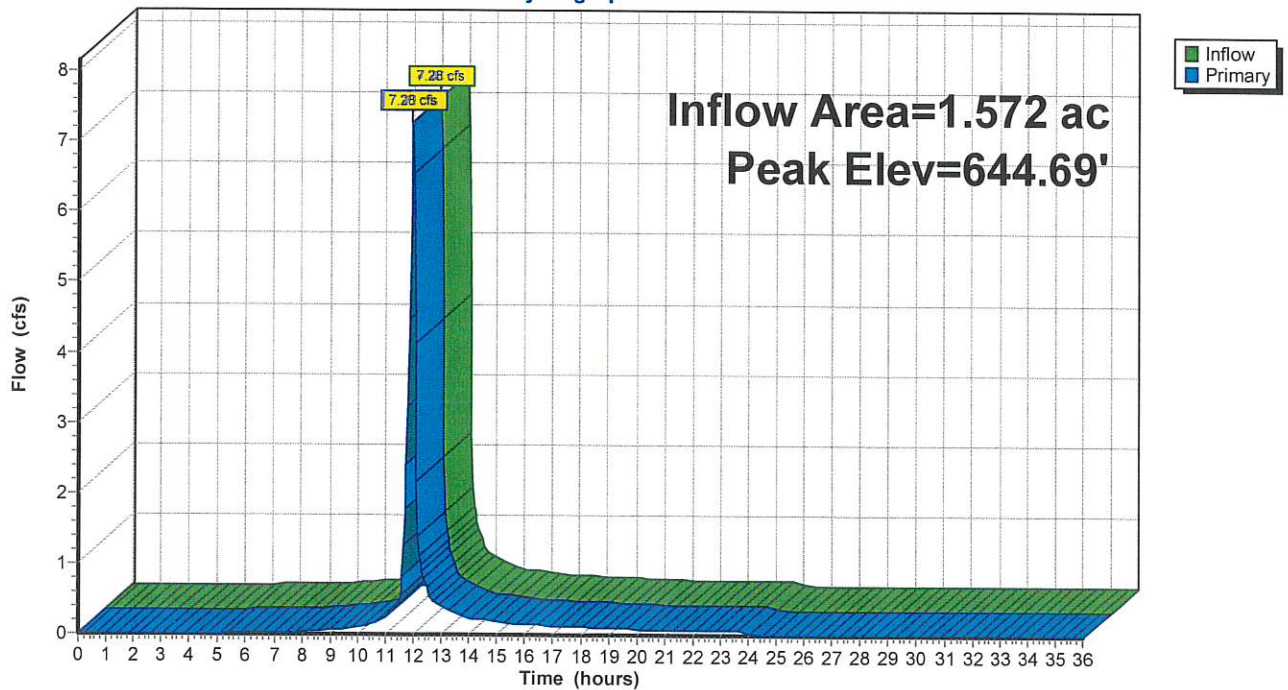
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

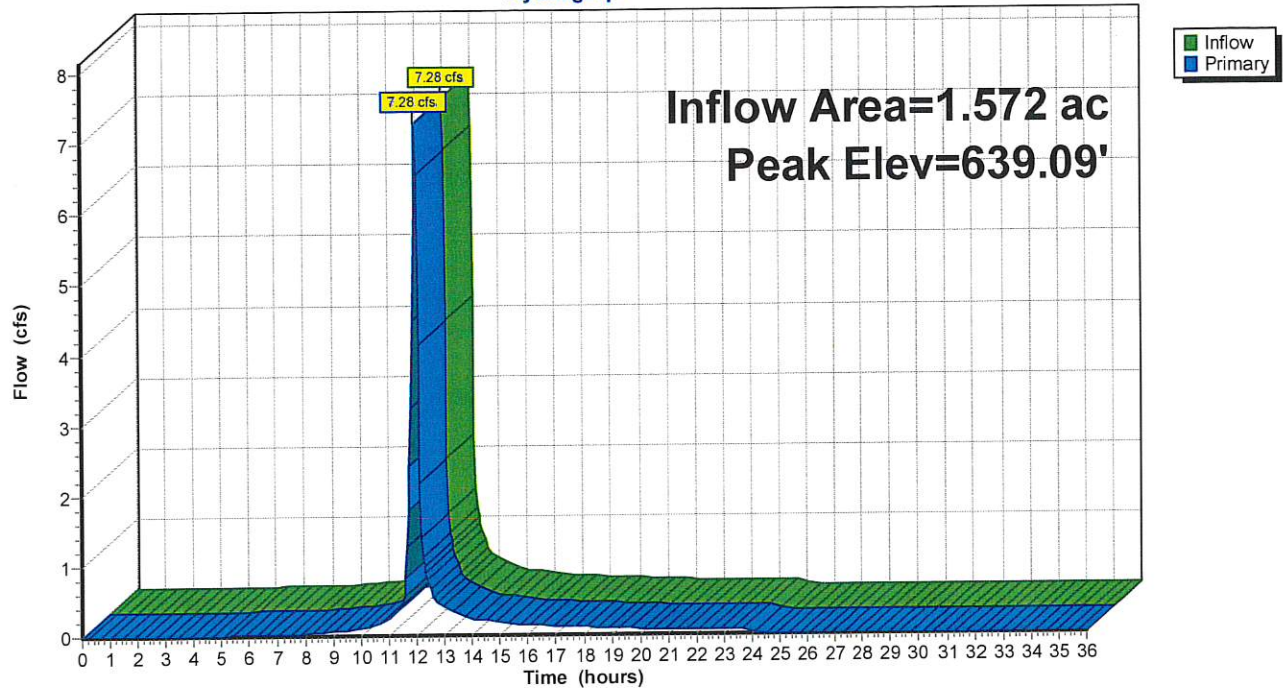
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 24

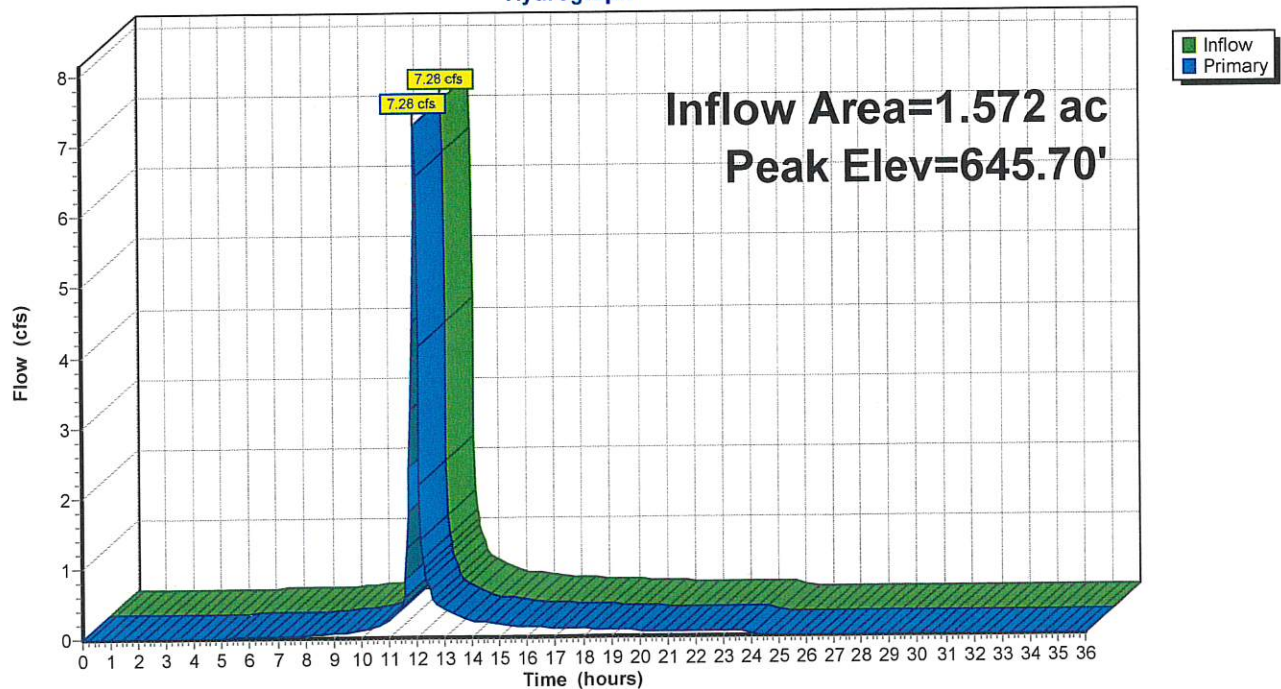
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

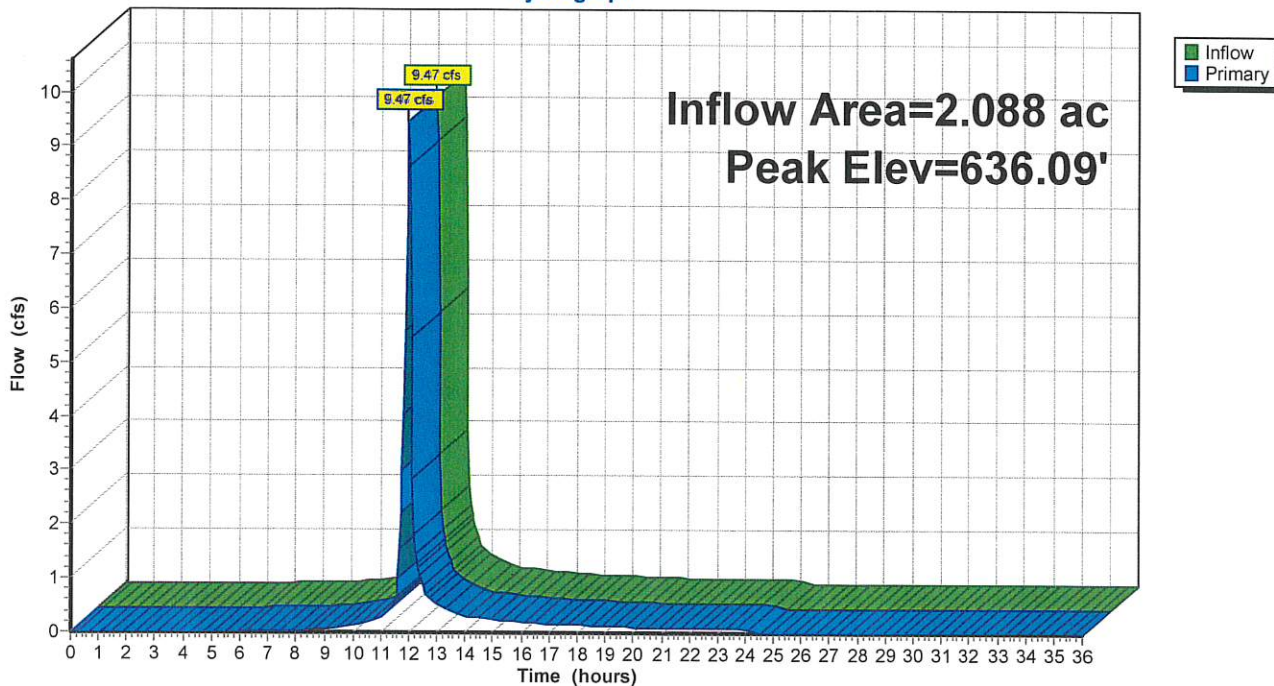
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 25

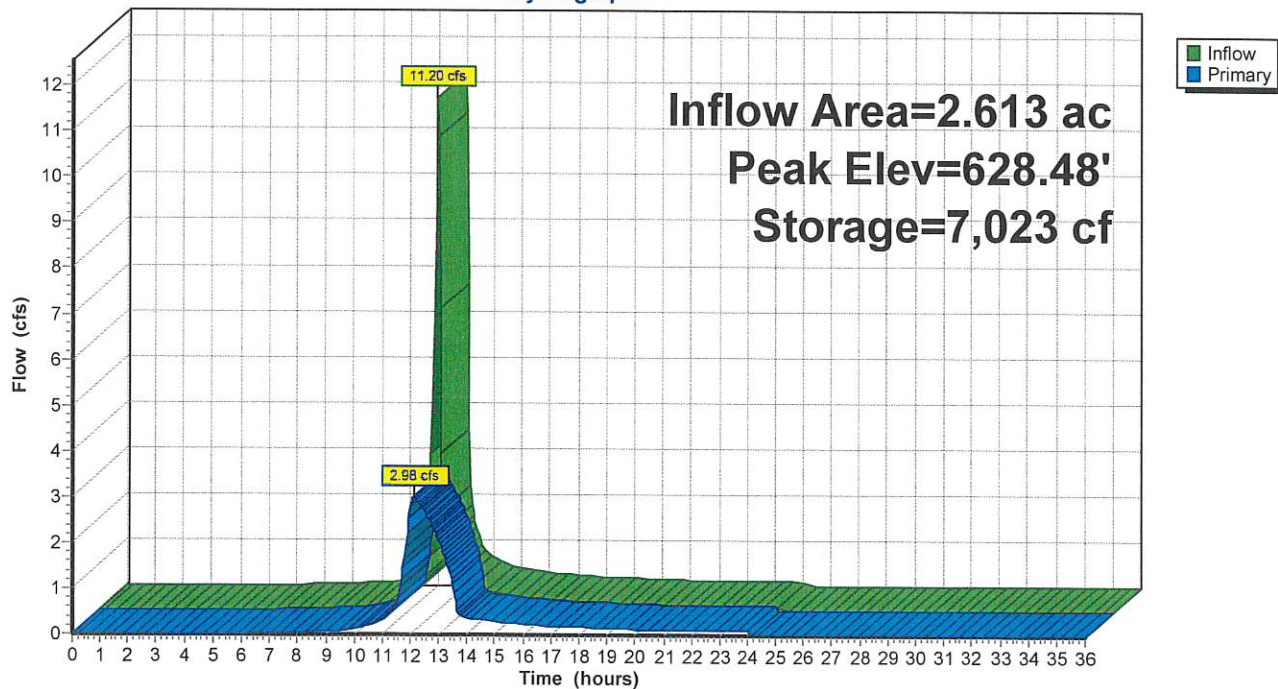
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

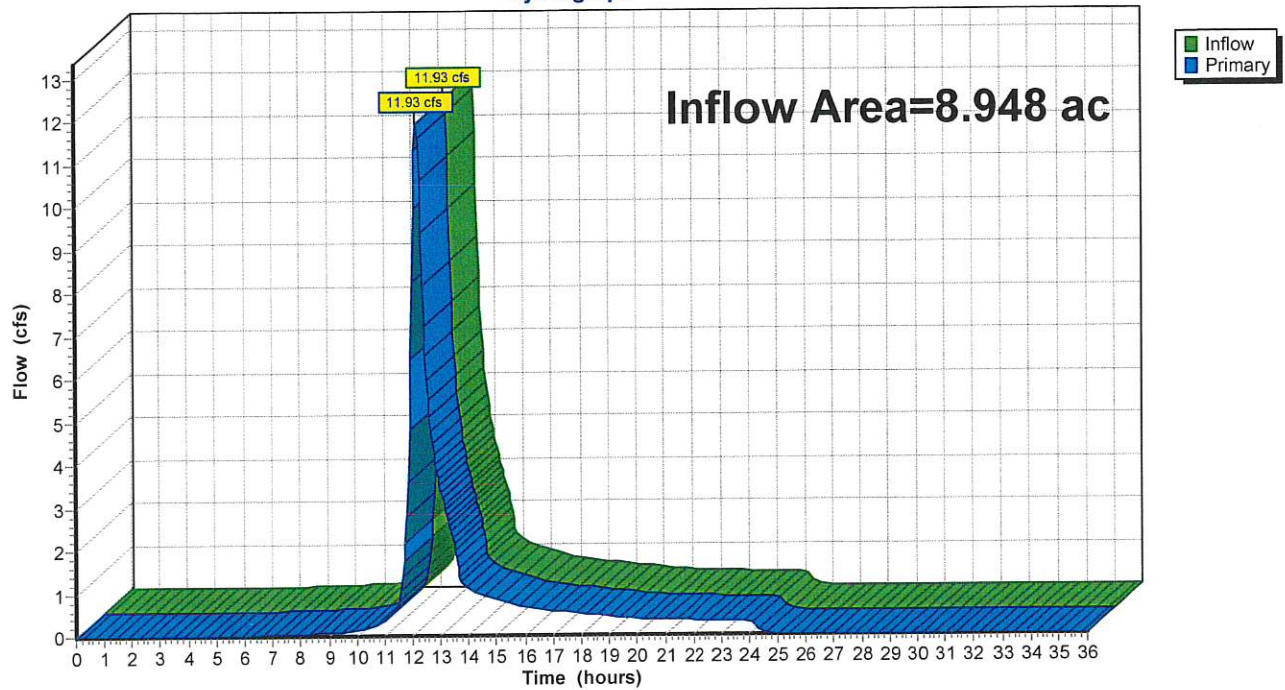
Brookhollow Senior Apartments
Type II 24-hr 5yr/24hr Rainfall=4.45"

Printed 9/13/2023

Page 26

Link 16L: Site Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

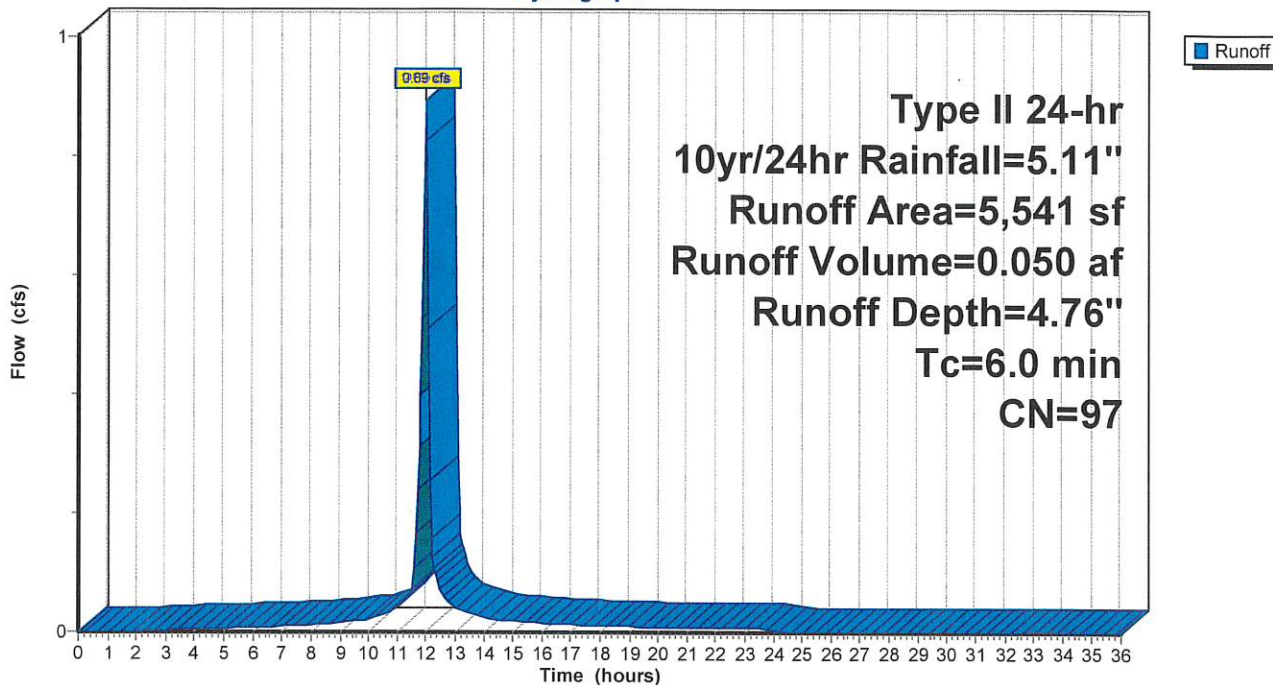
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 27

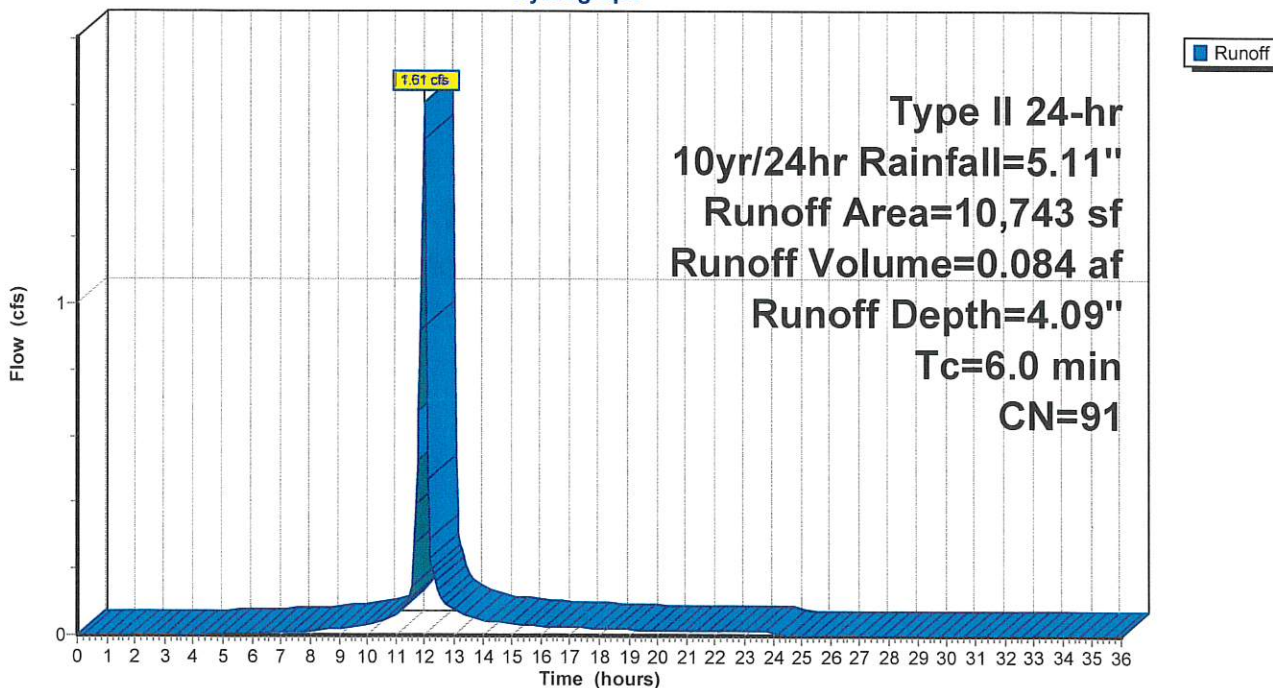
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

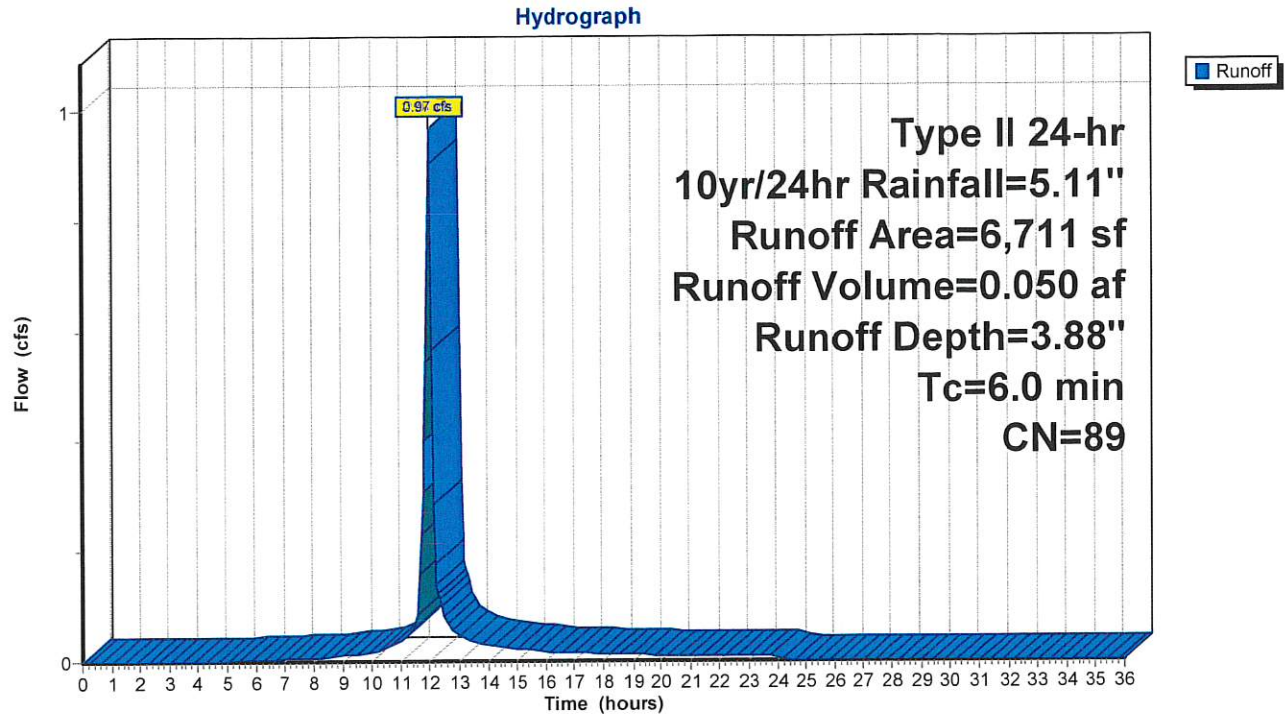
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

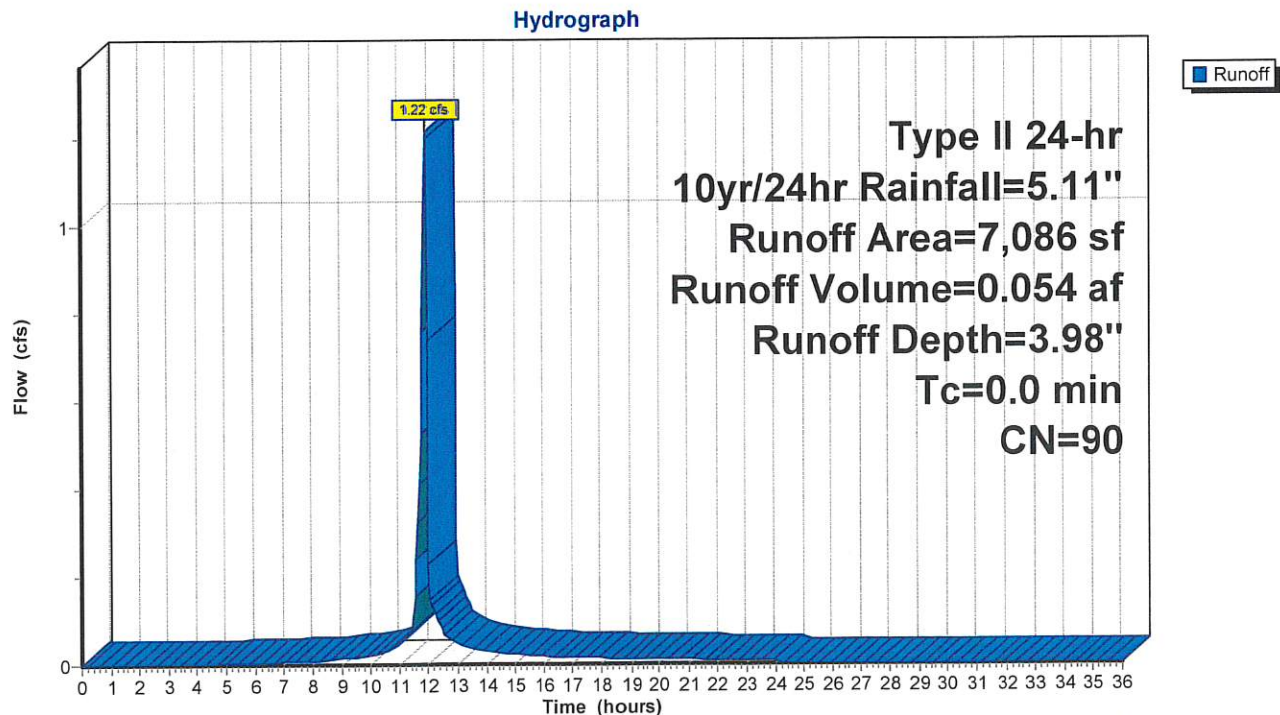
Printed 9/13/2023

Page 28

Subcatchment 3S: To CB3



Subcatchment 4S: To CB4



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

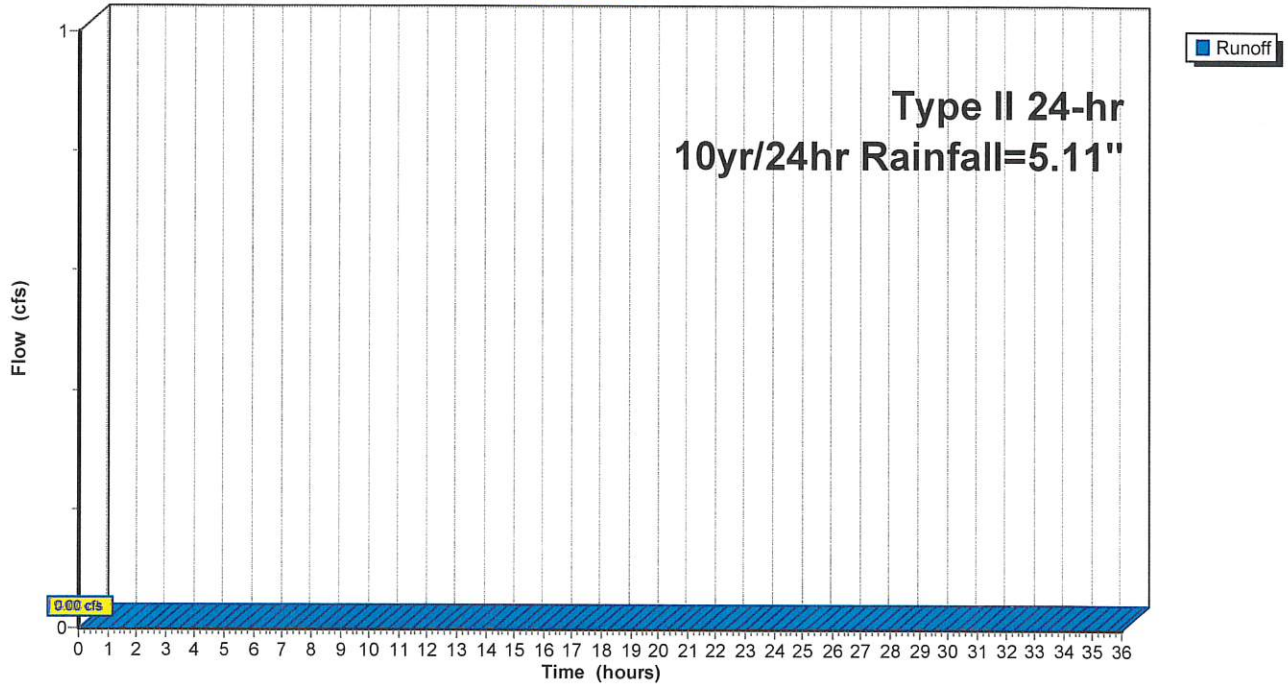
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 29

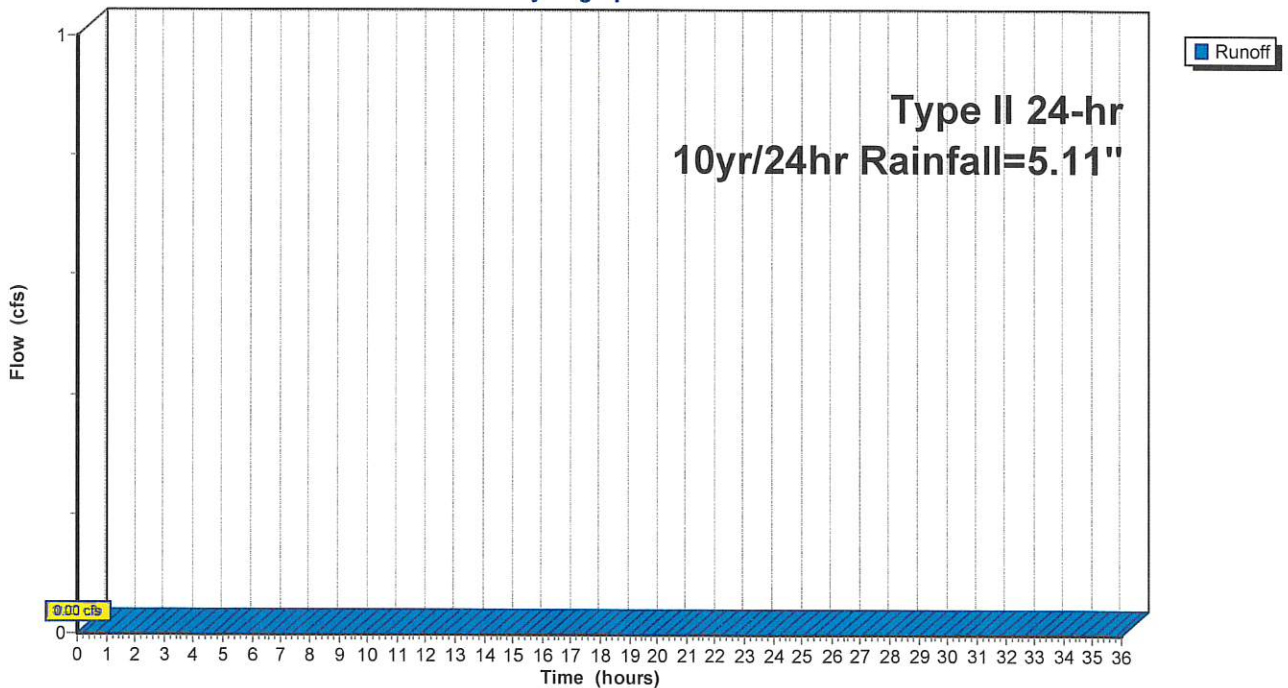
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

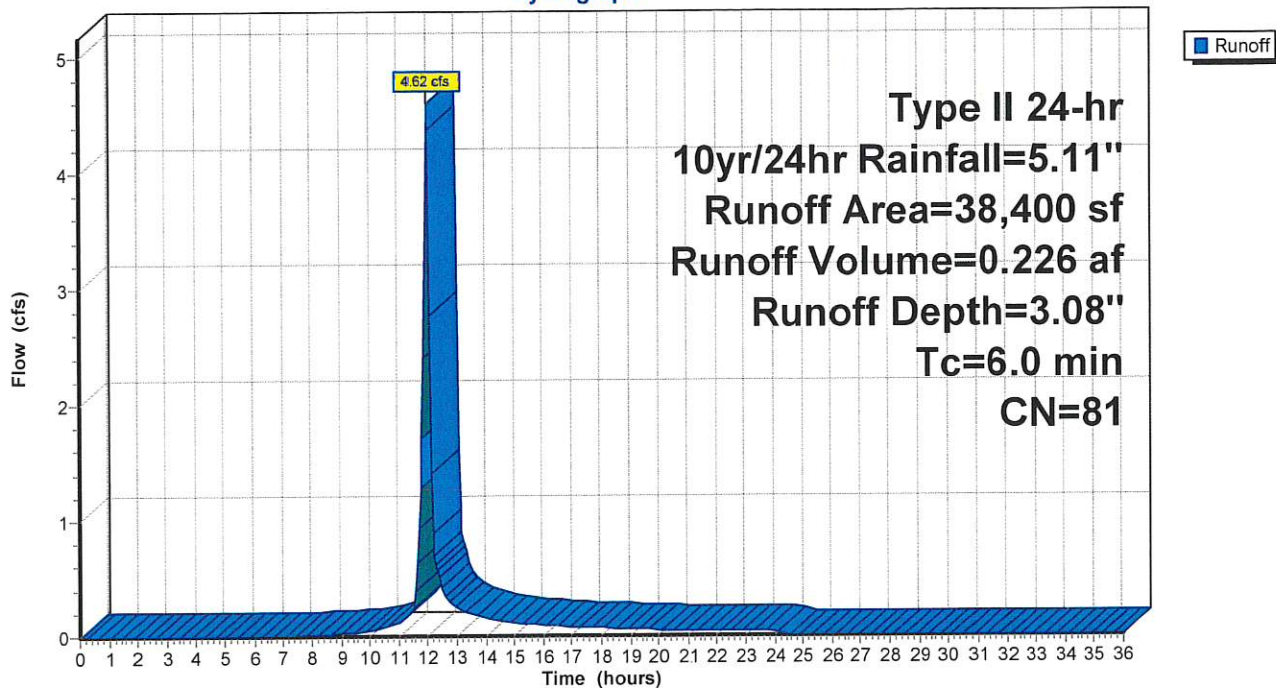
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 30

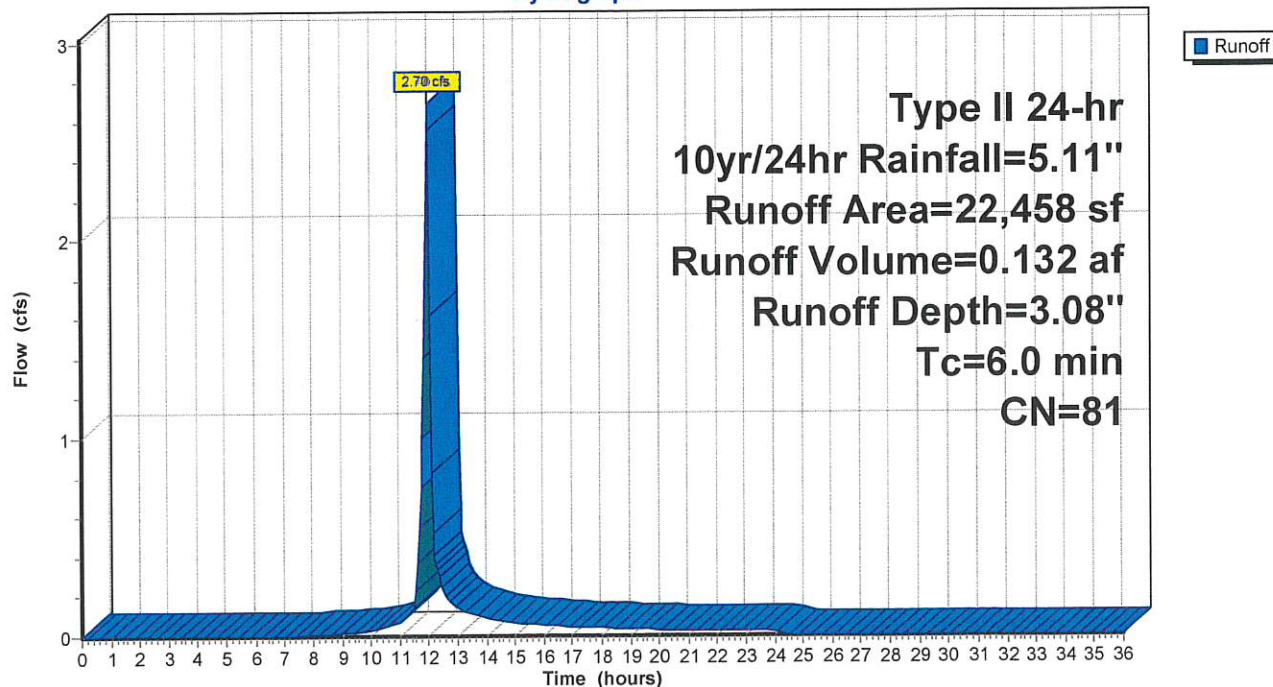
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

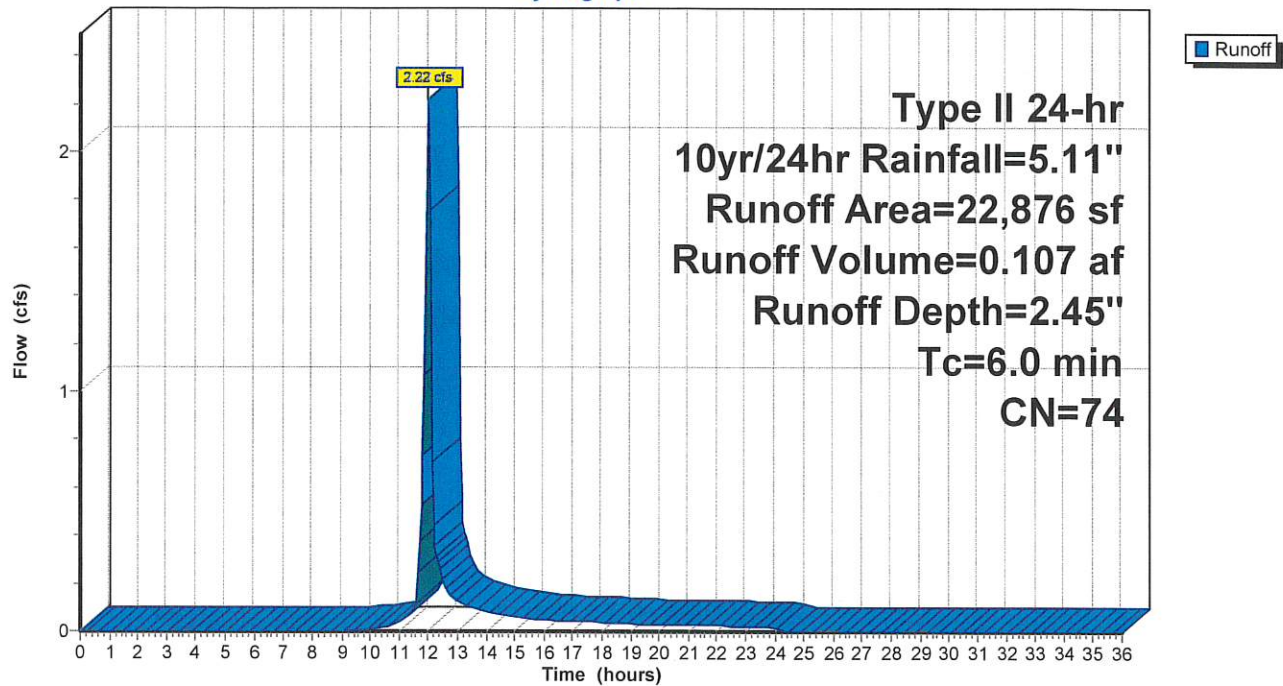
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 31

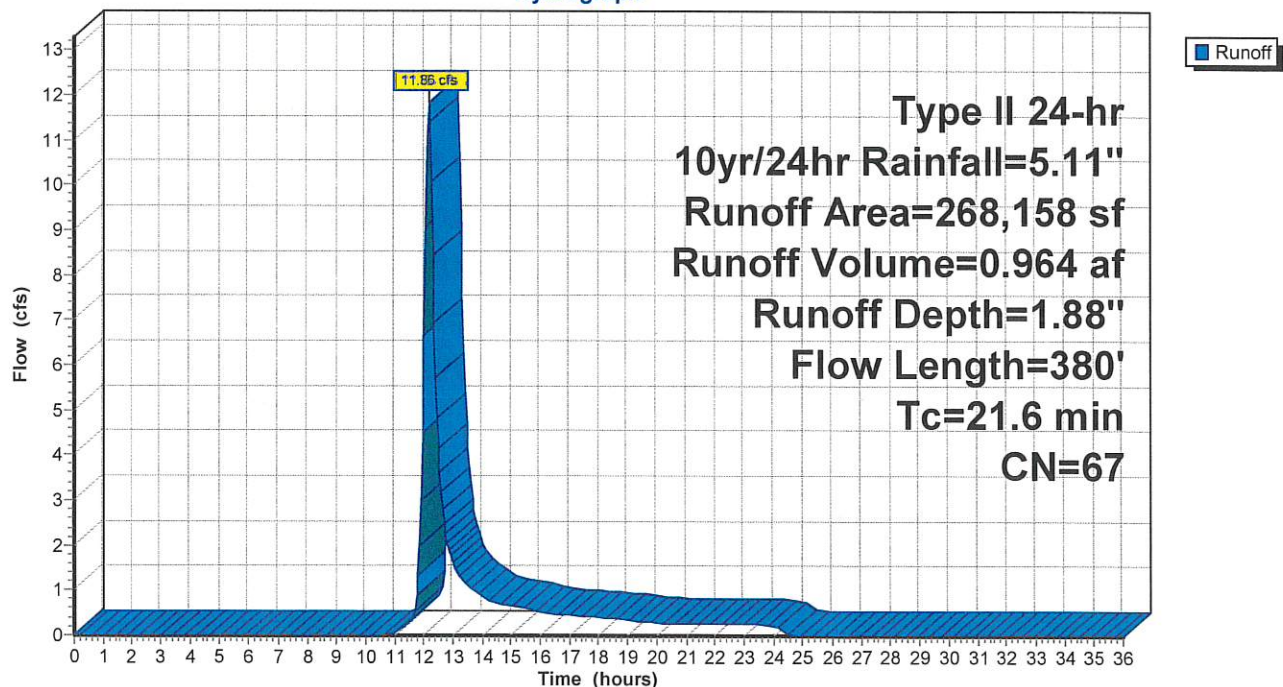
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

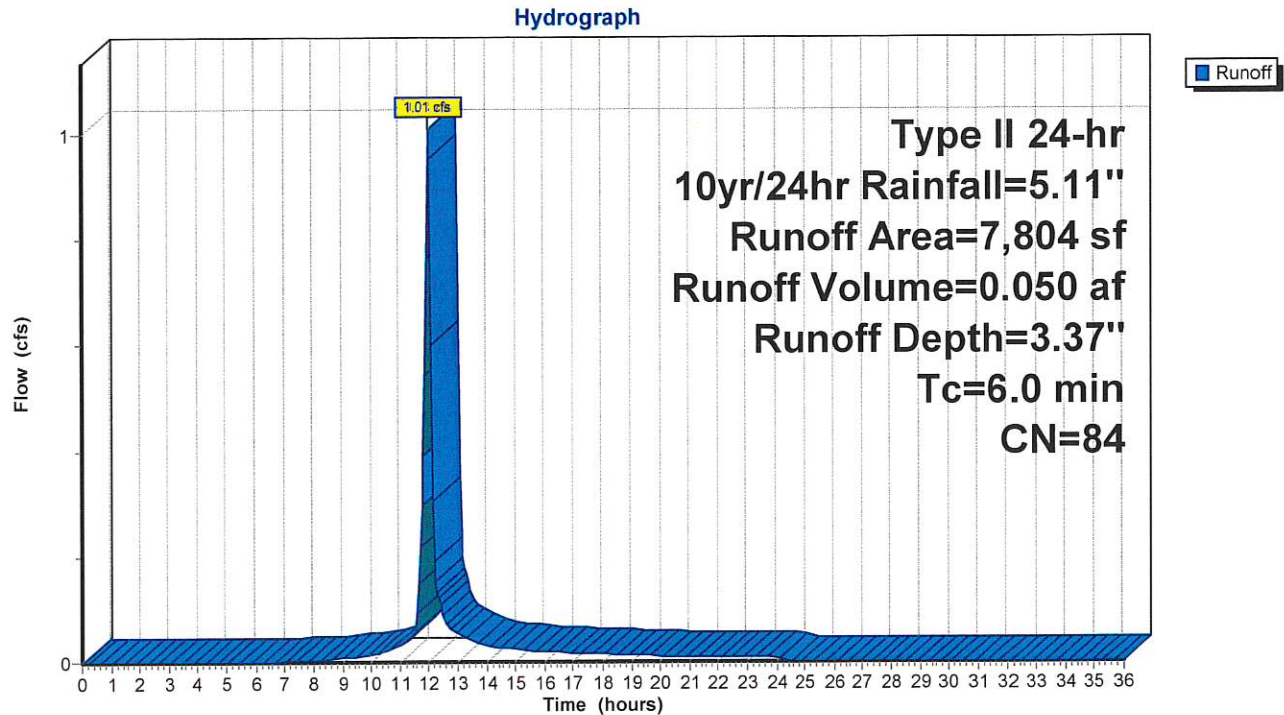
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

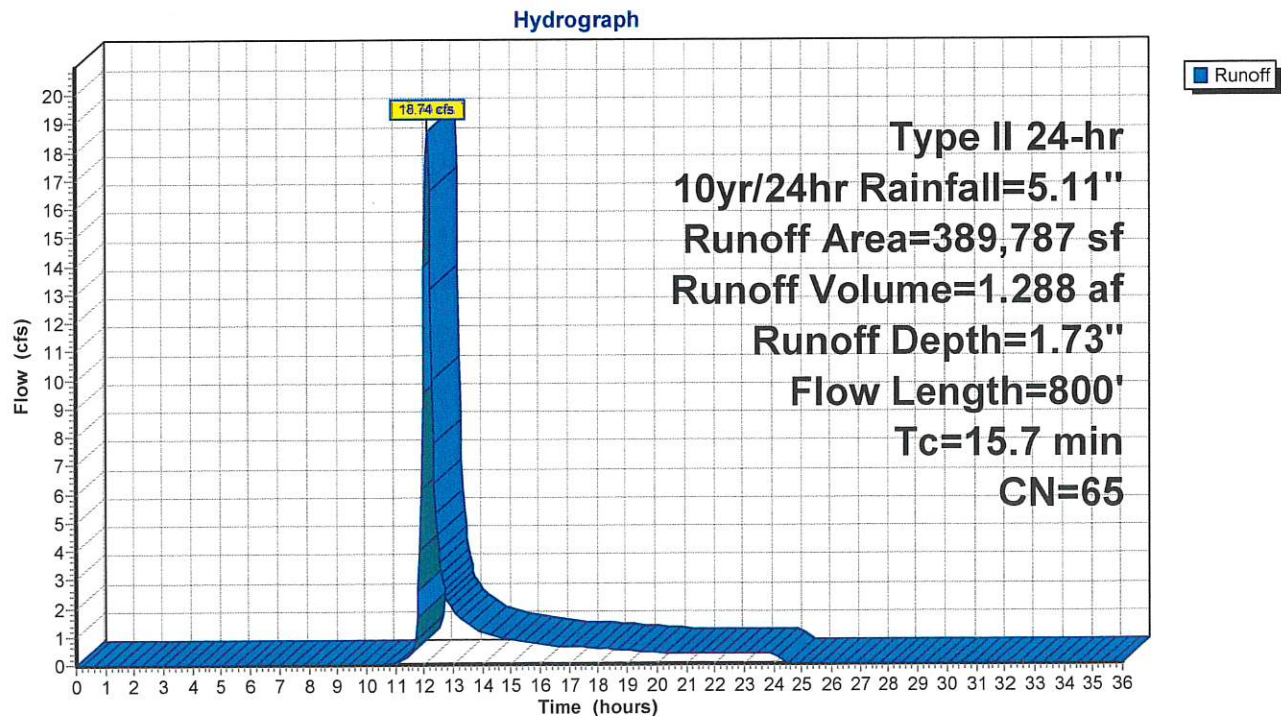
Printed 9/13/2023

Page 32

Subcatchment 9S: To Trench Drain



Subcatchment OS: To Outfall



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

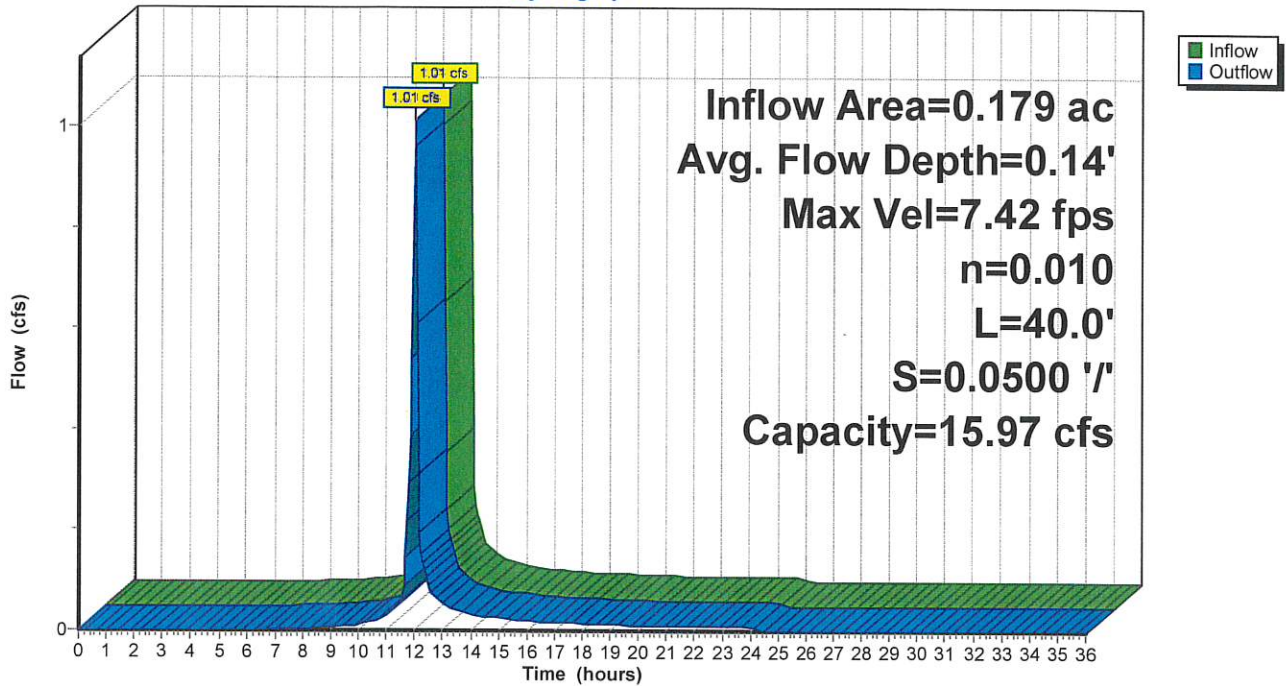
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 33

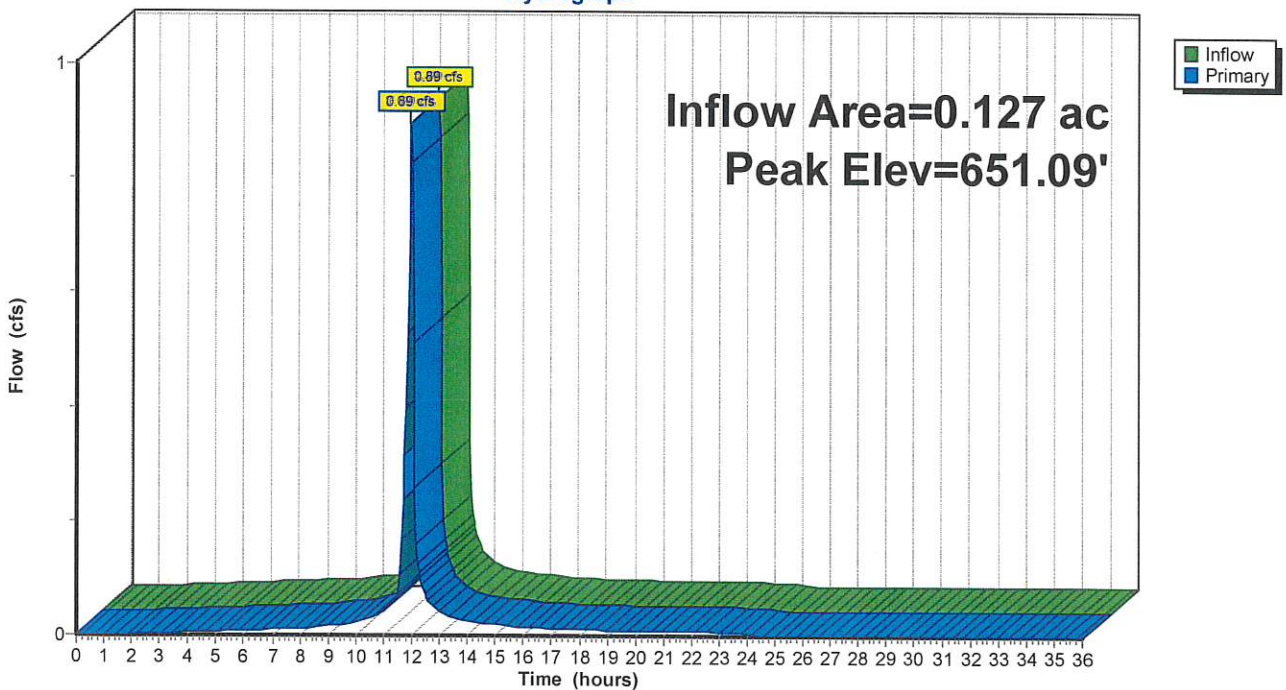
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

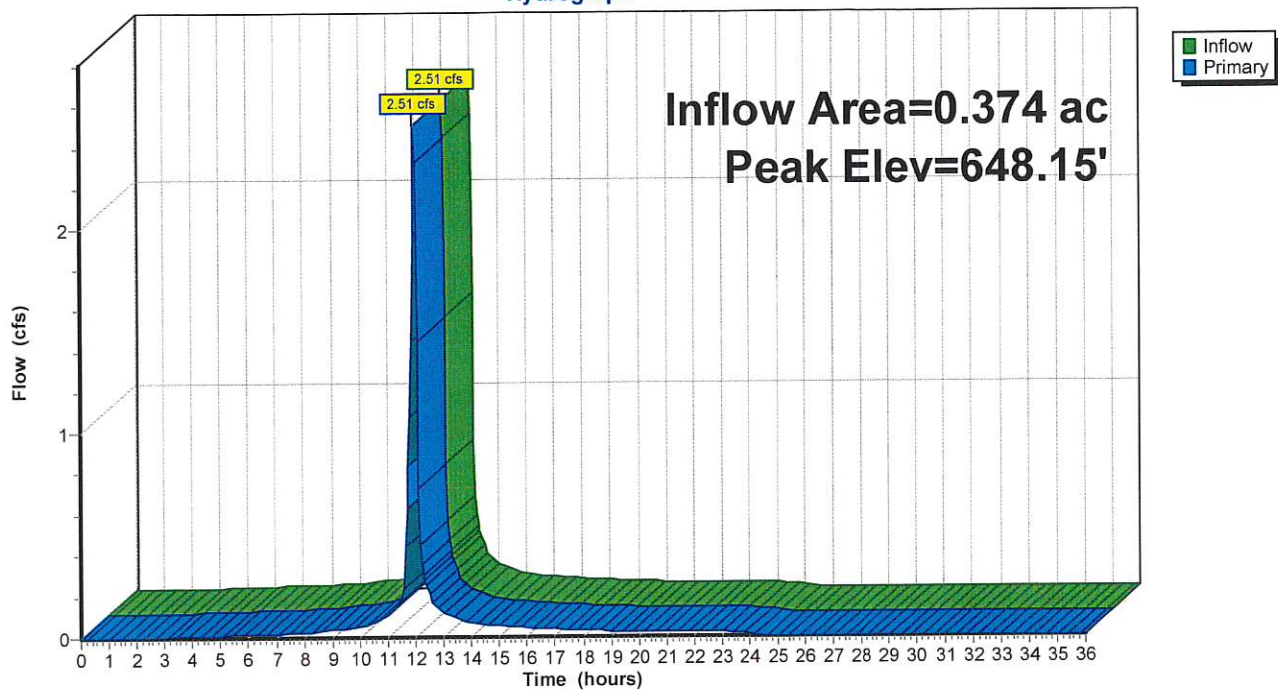
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 34

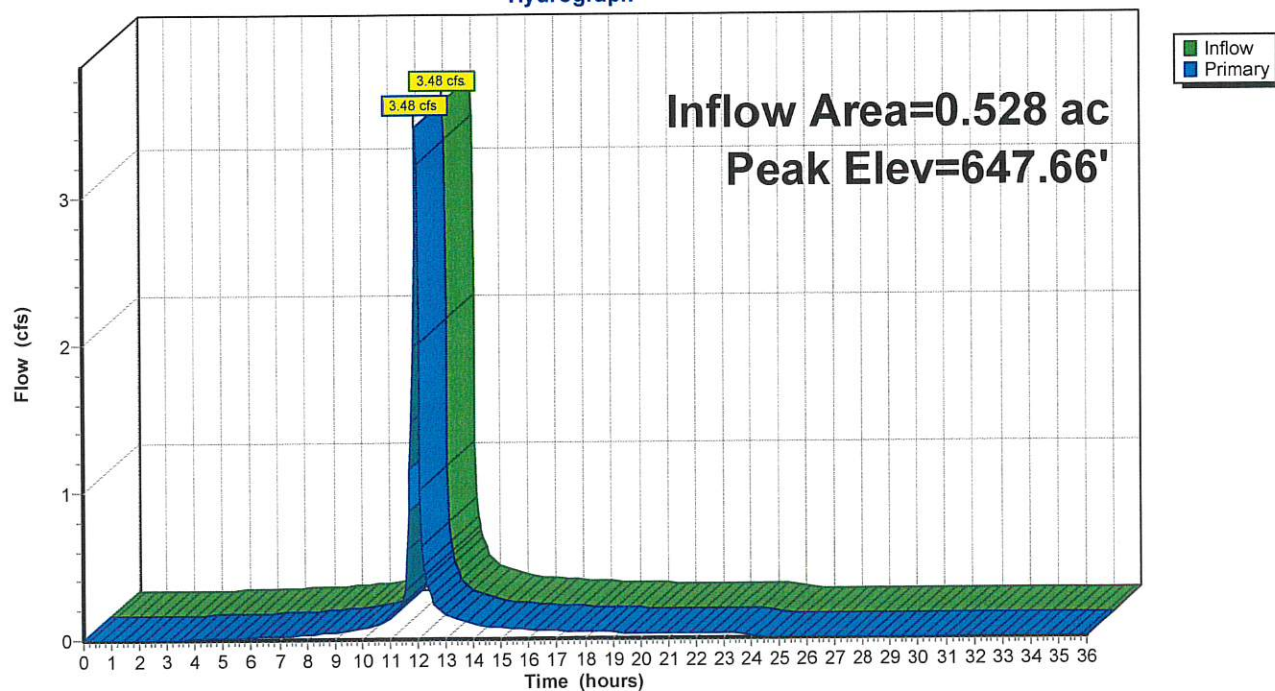
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

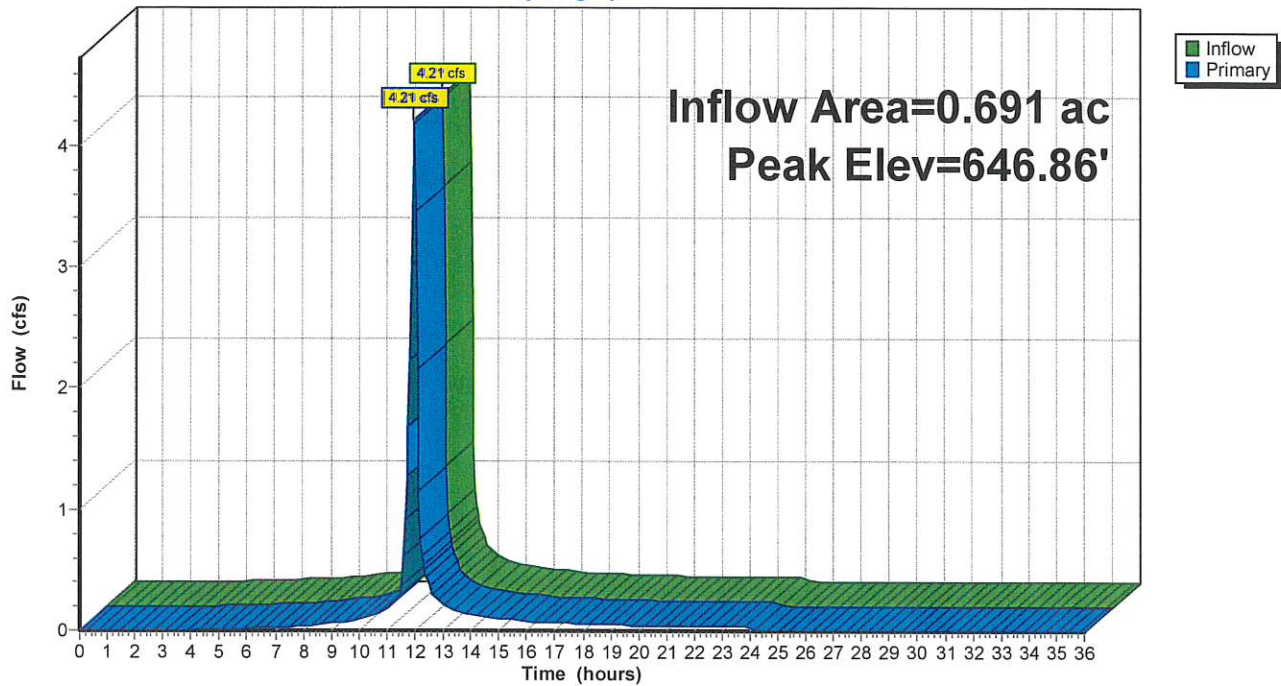
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 35

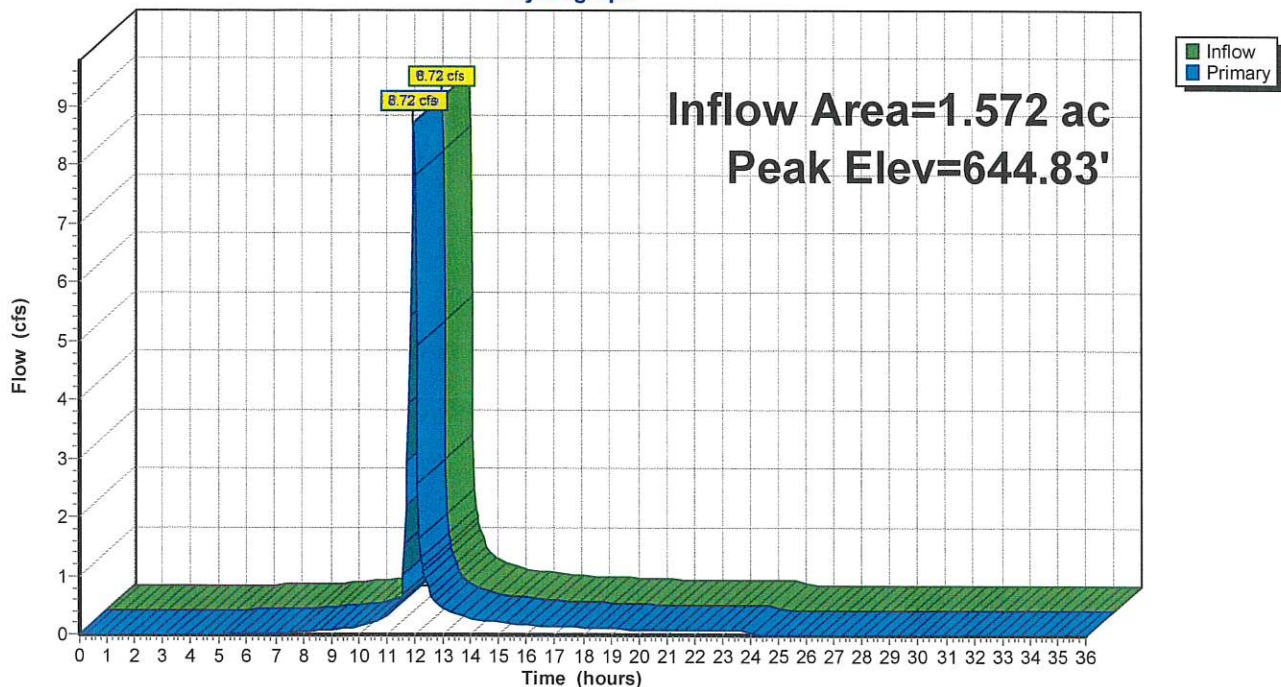
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

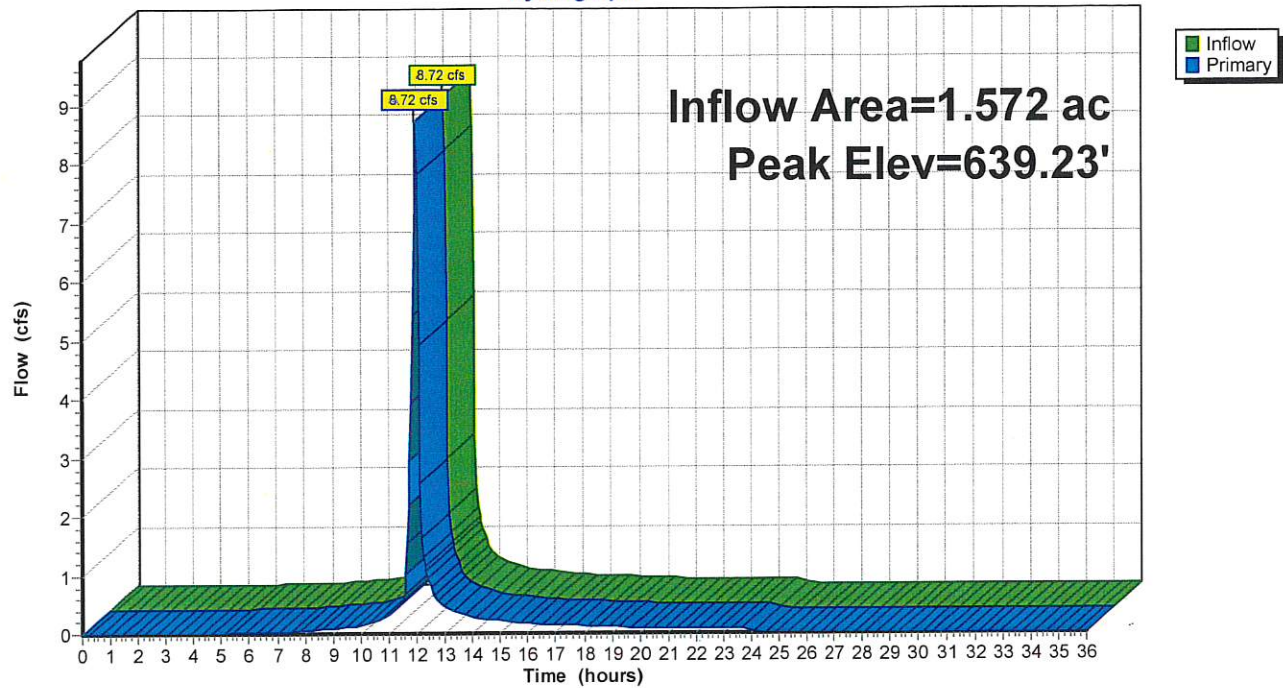
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 36

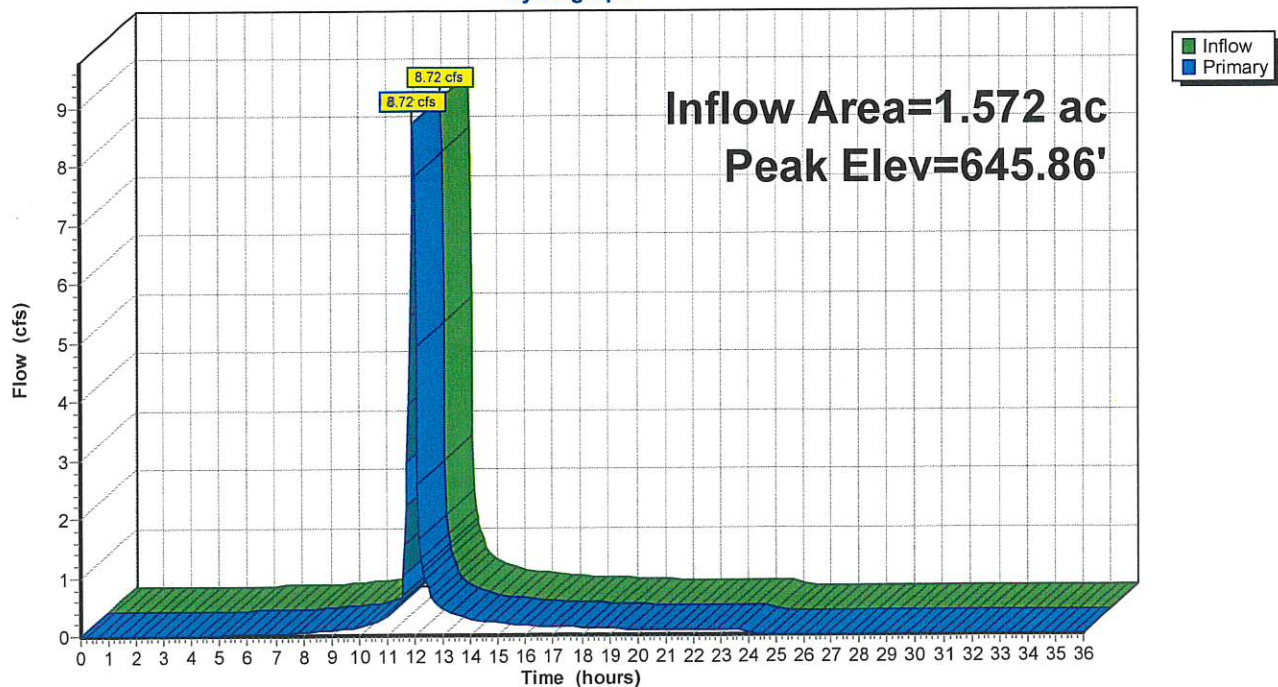
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

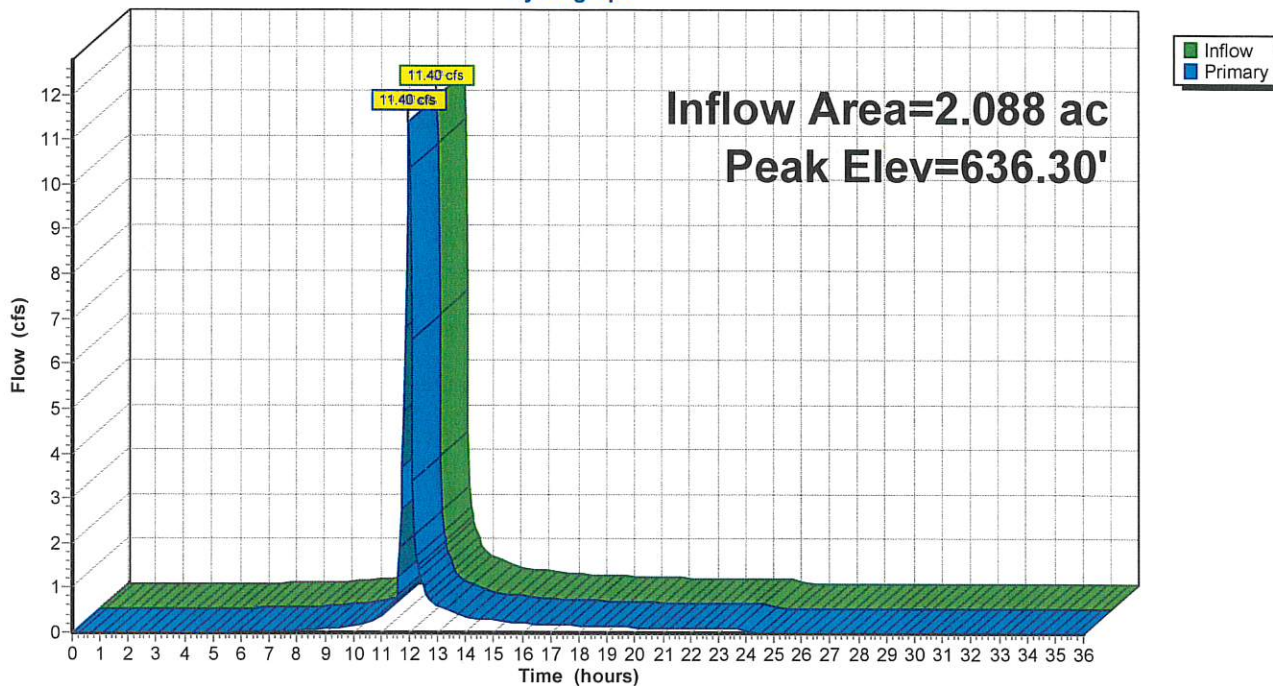
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 37

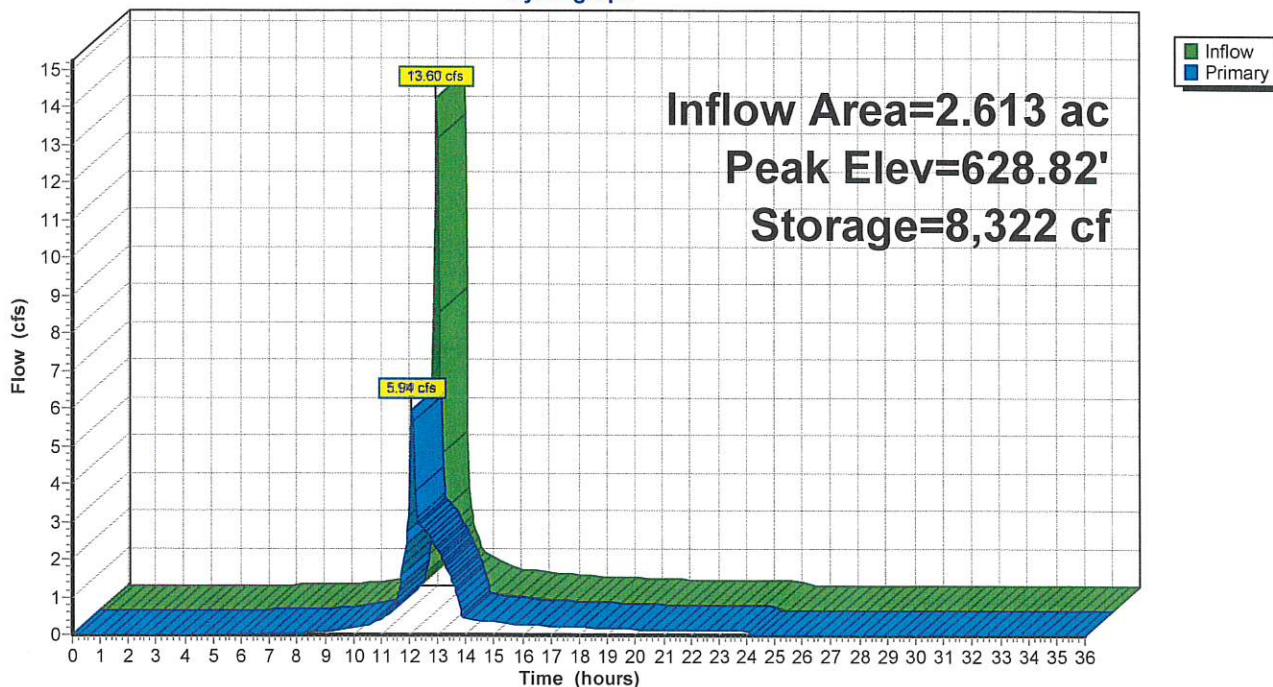
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

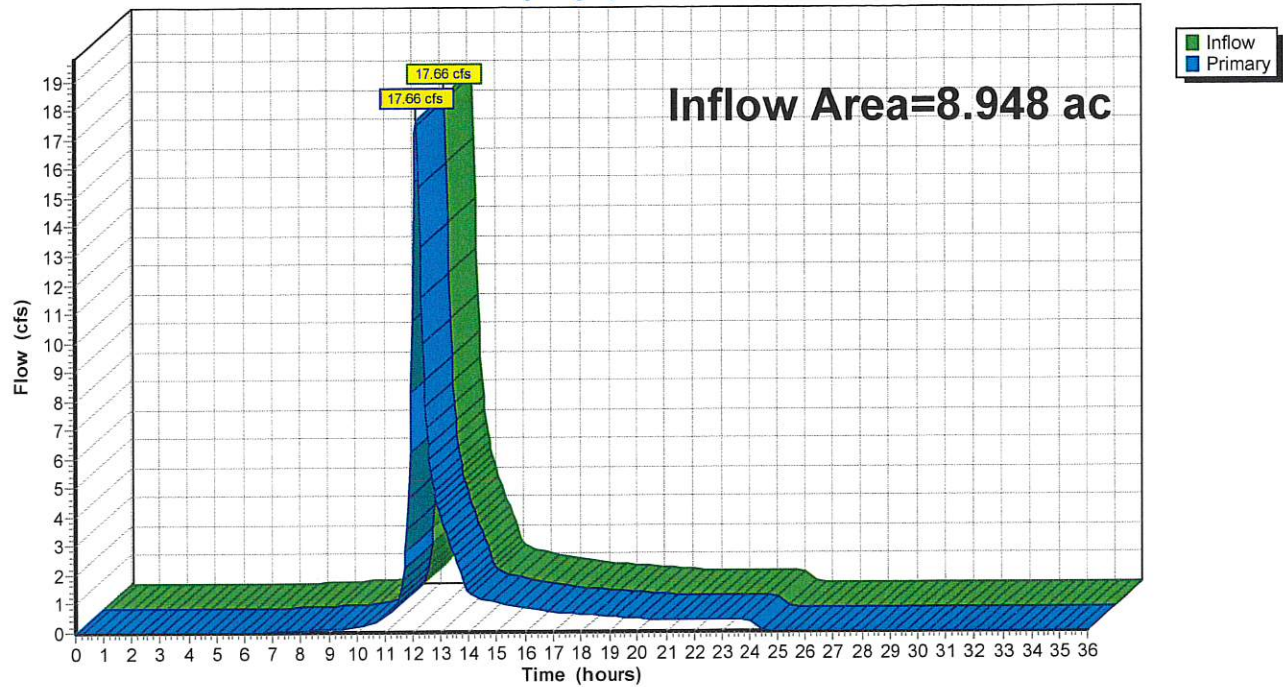
Brookhollow Senior Apartments
Type II 24-hr 10yr/24hr Rainfall=5.11"

Printed 9/13/2023

Page 38

Link 16L: Site Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

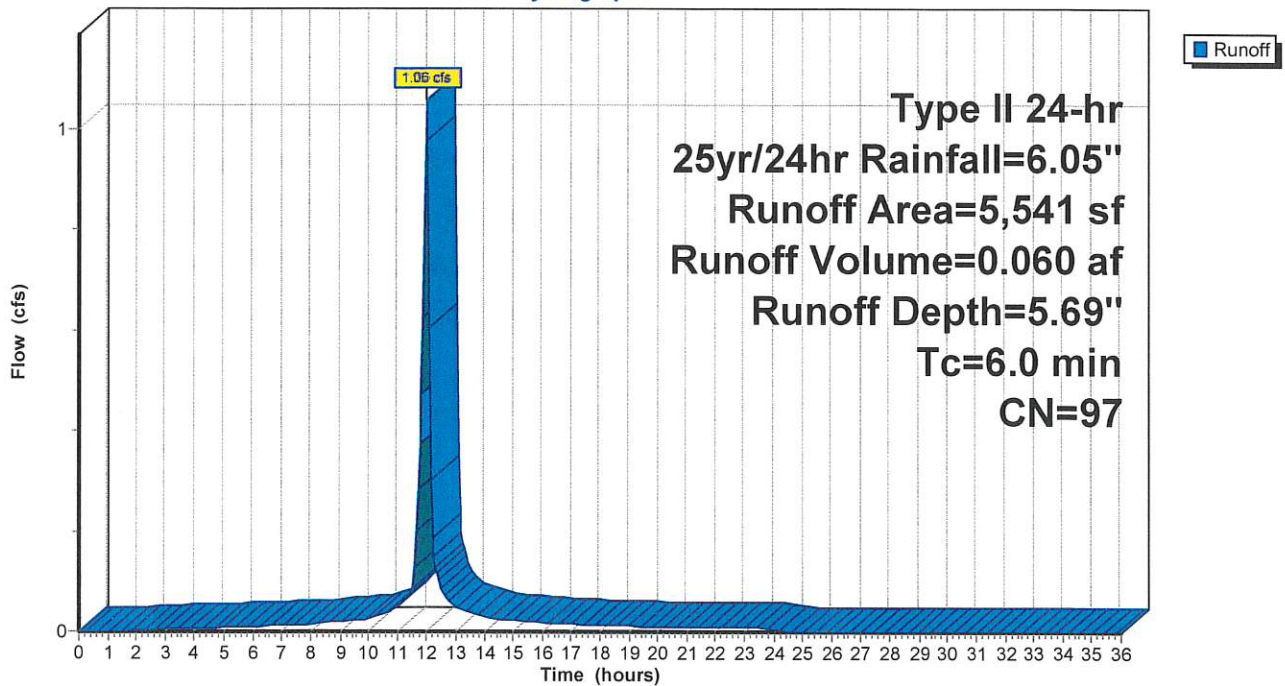
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 39

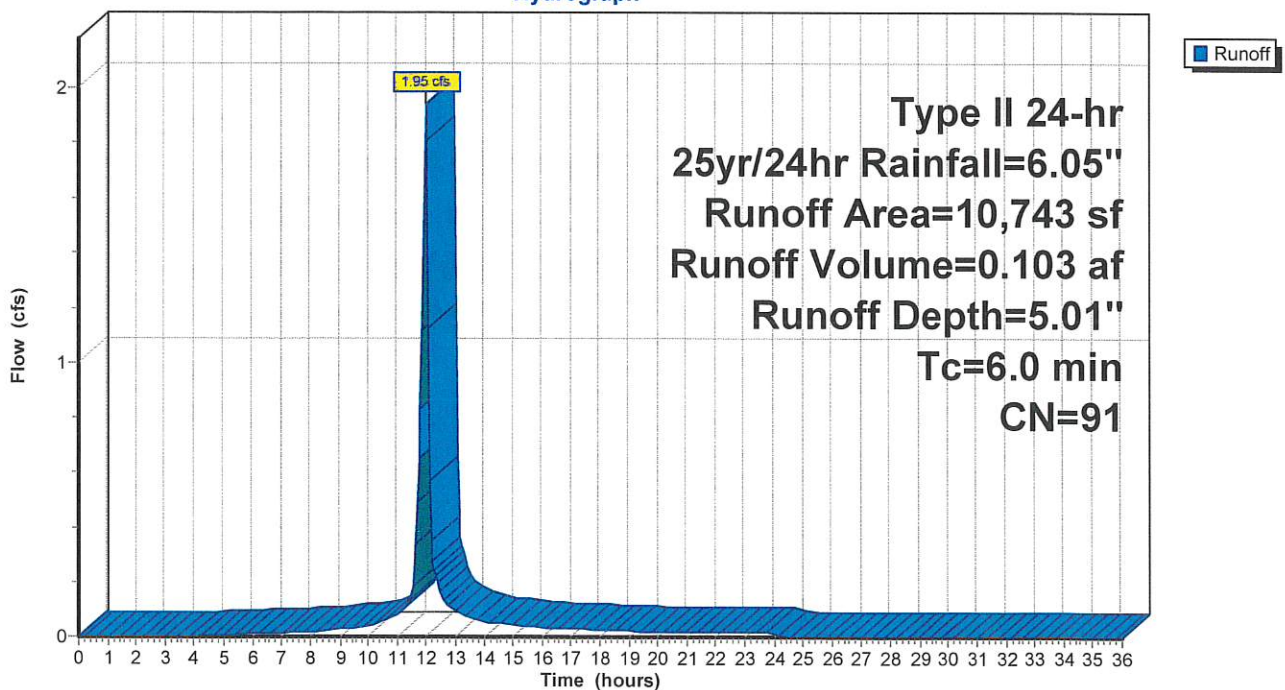
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

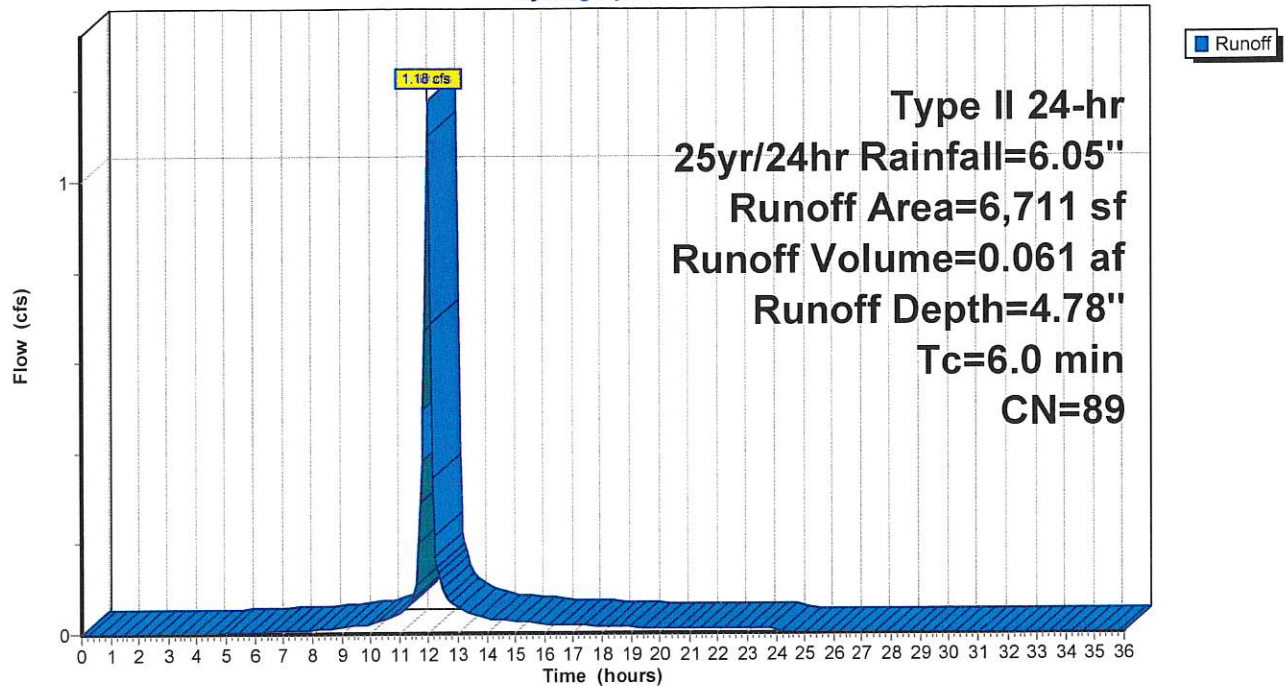
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 40

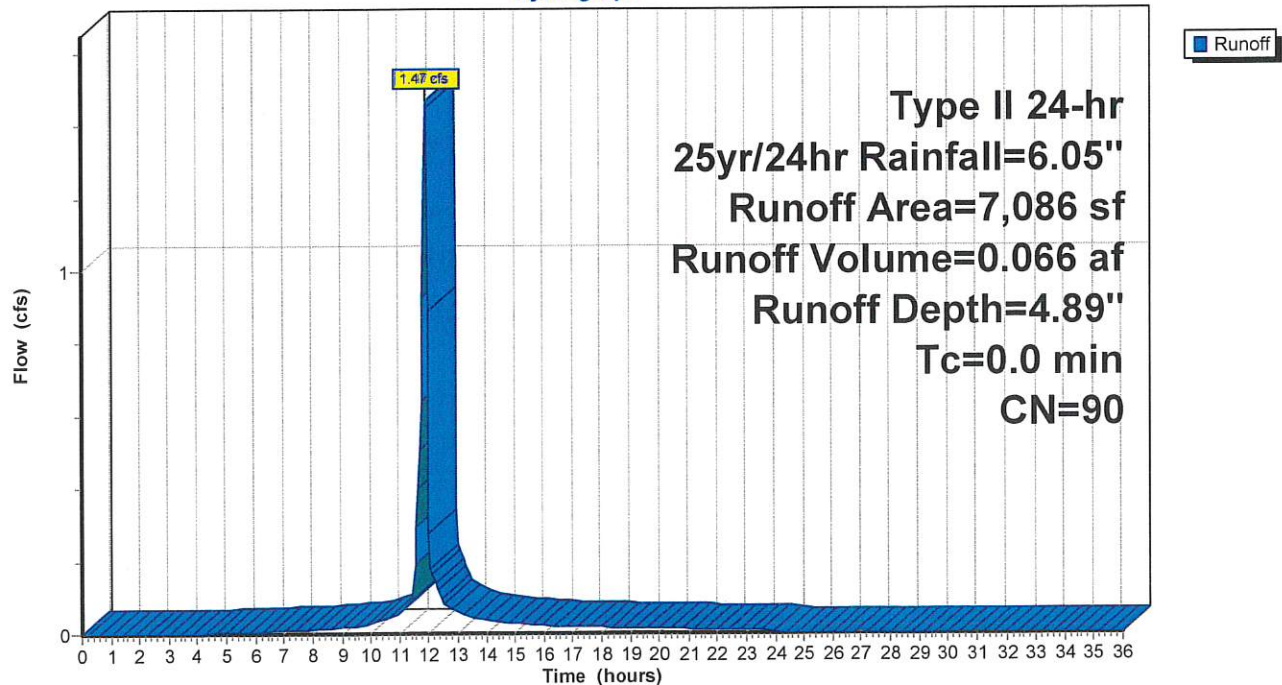
Subcatchment 3S: To CB3

Hydrograph



Subcatchment 4S: To CB4

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

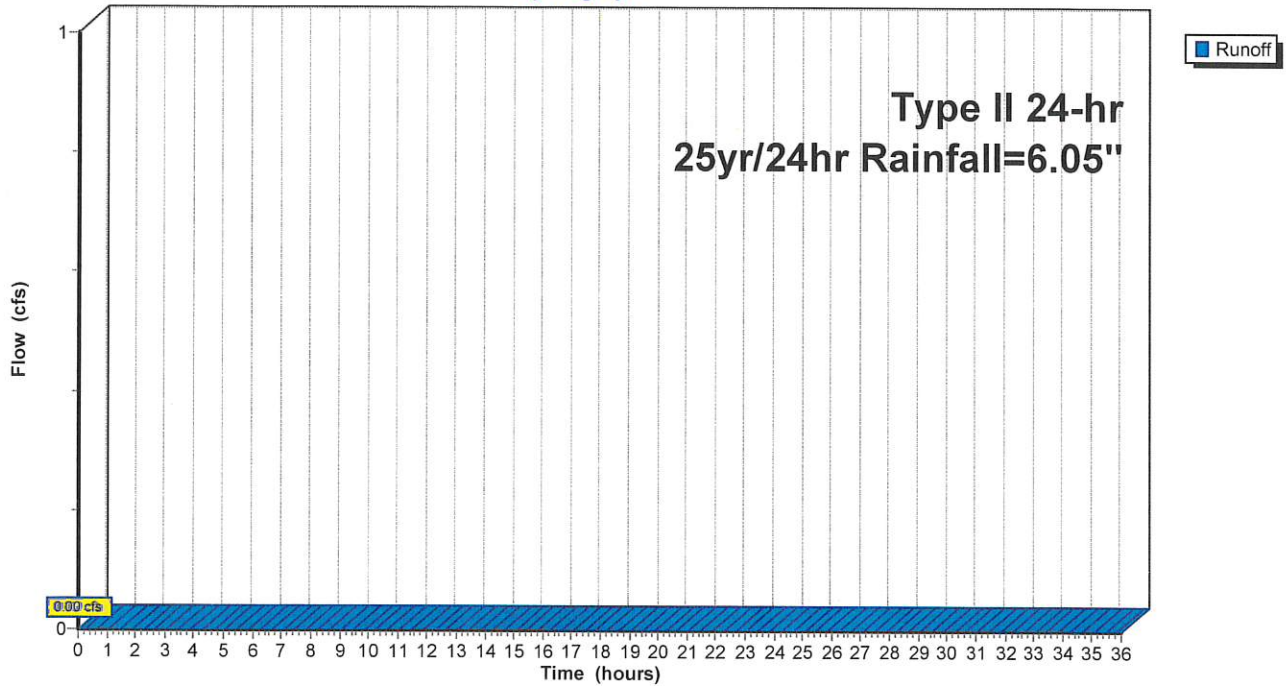
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 41

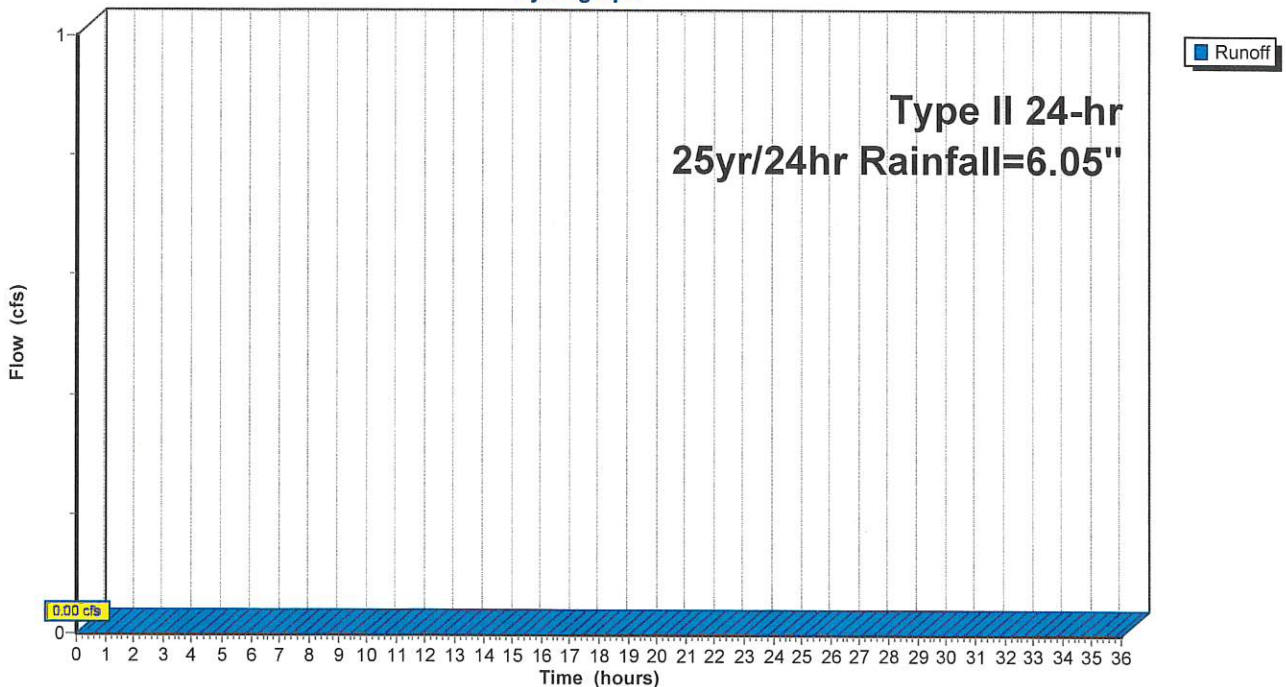
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

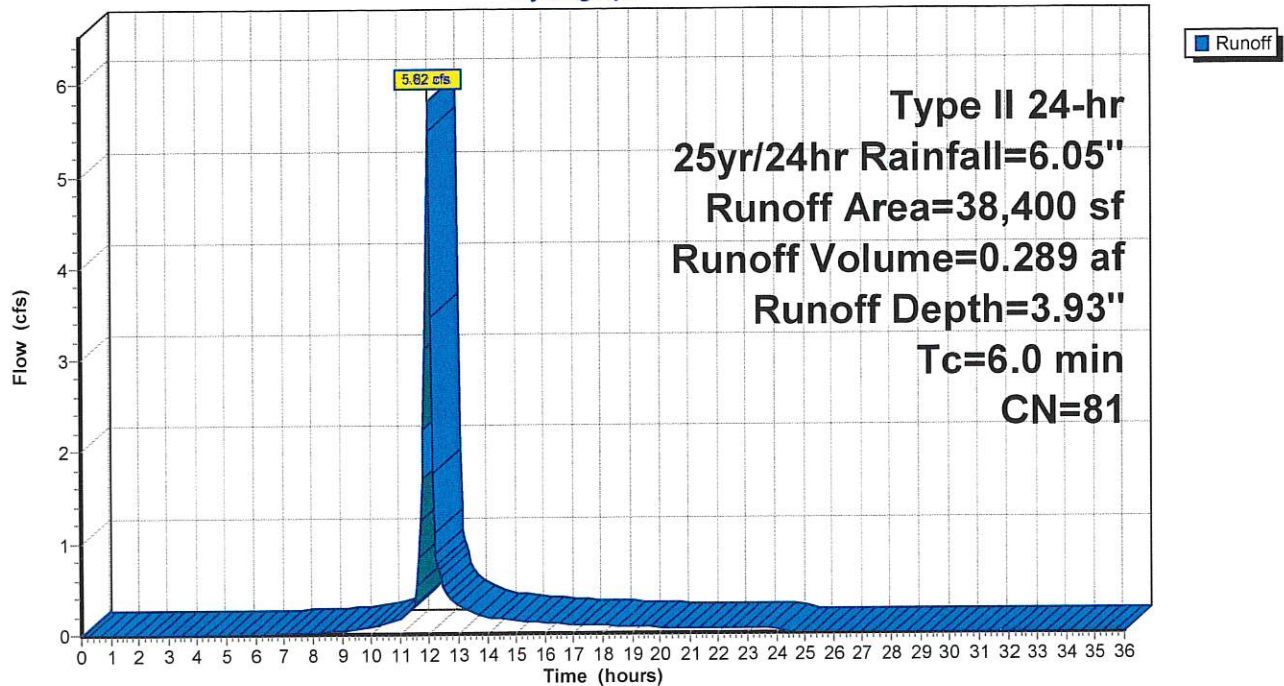
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 42

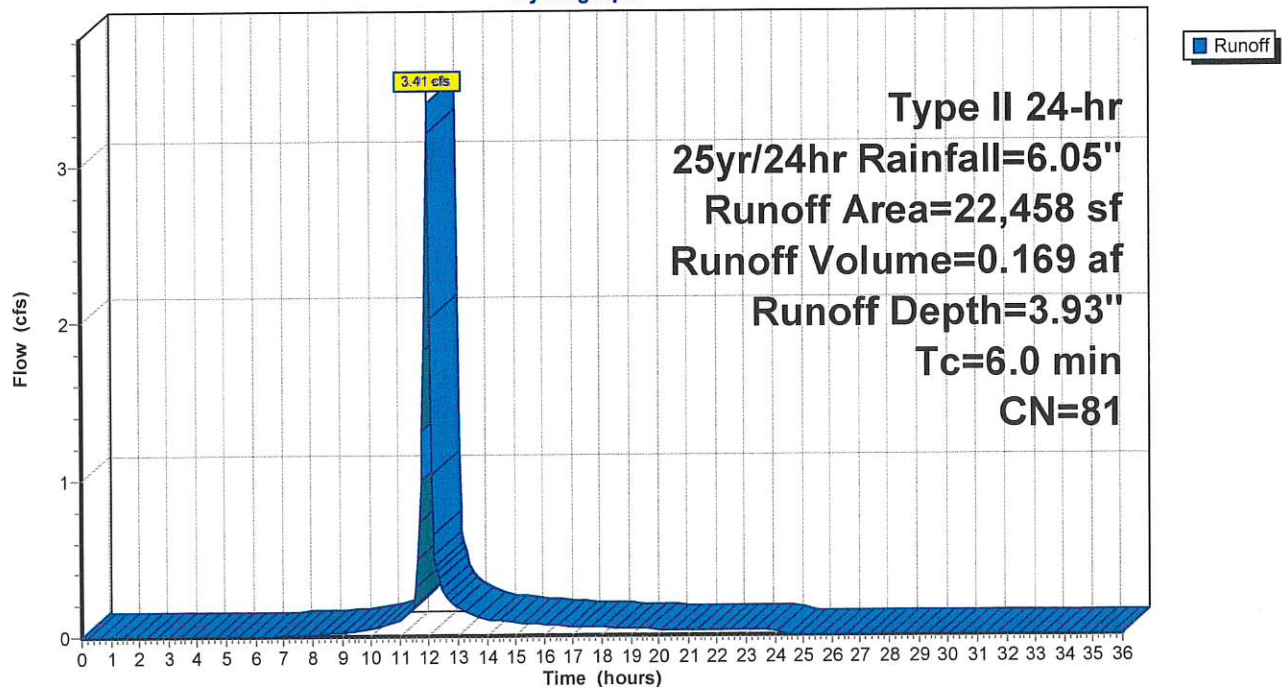
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

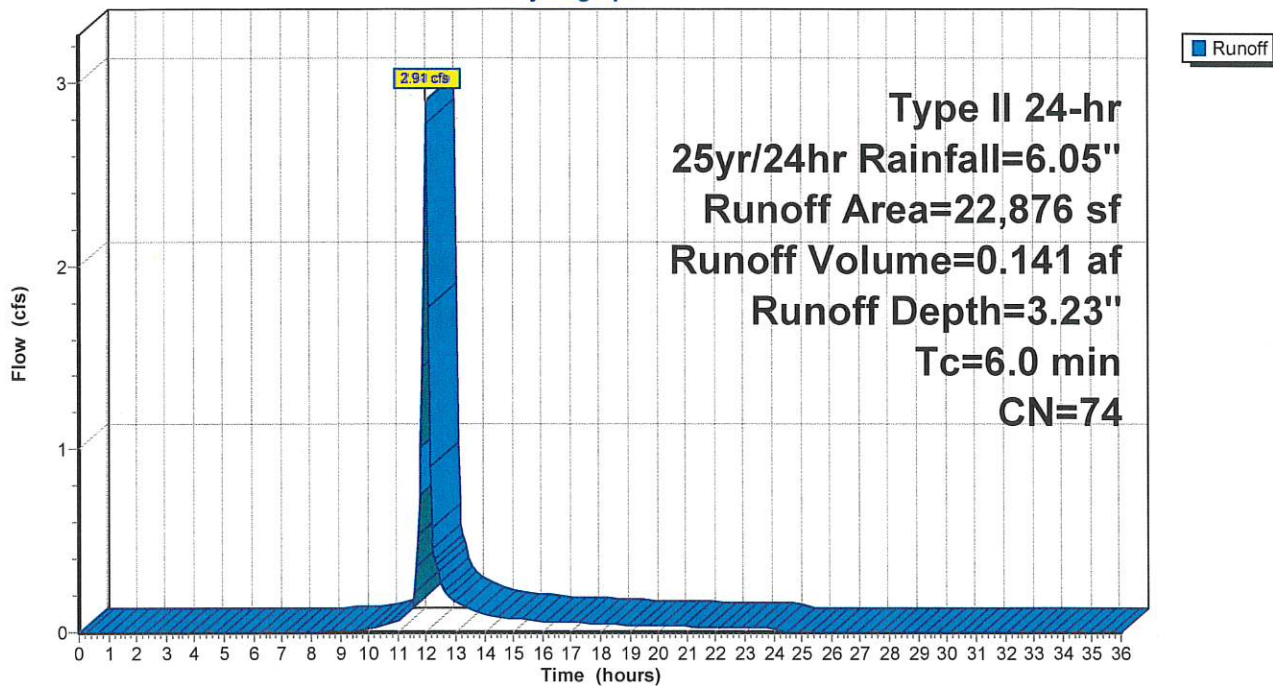
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 43

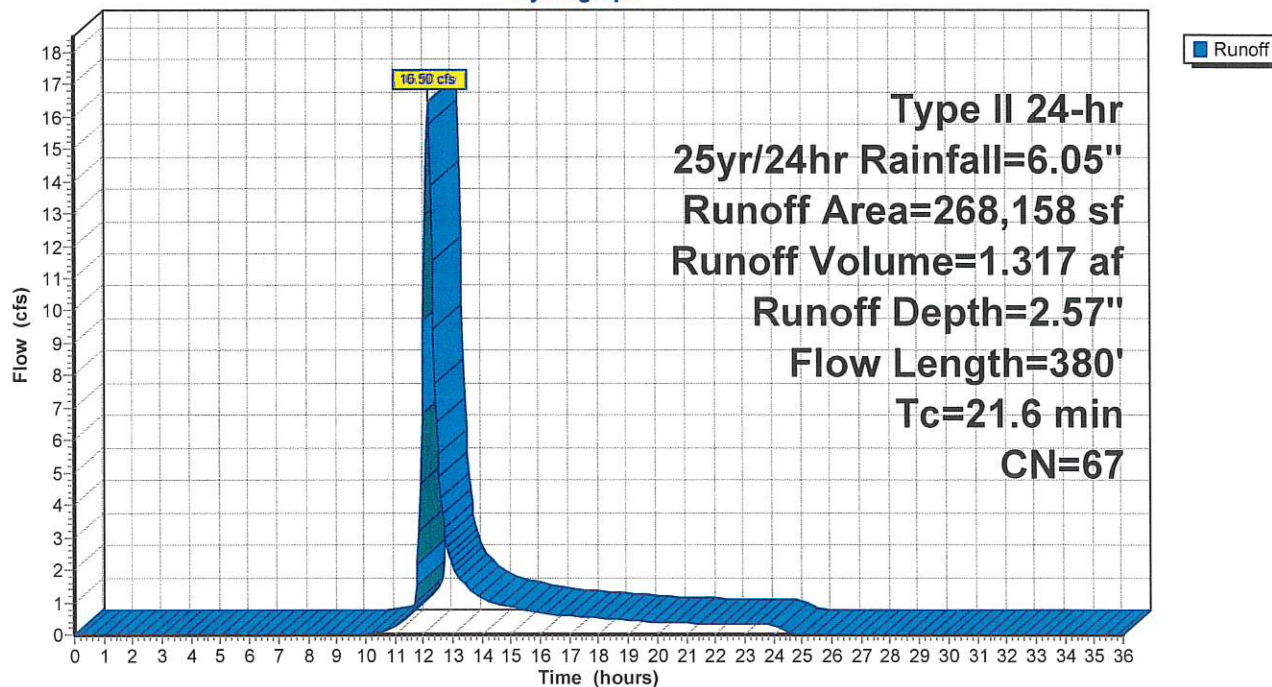
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

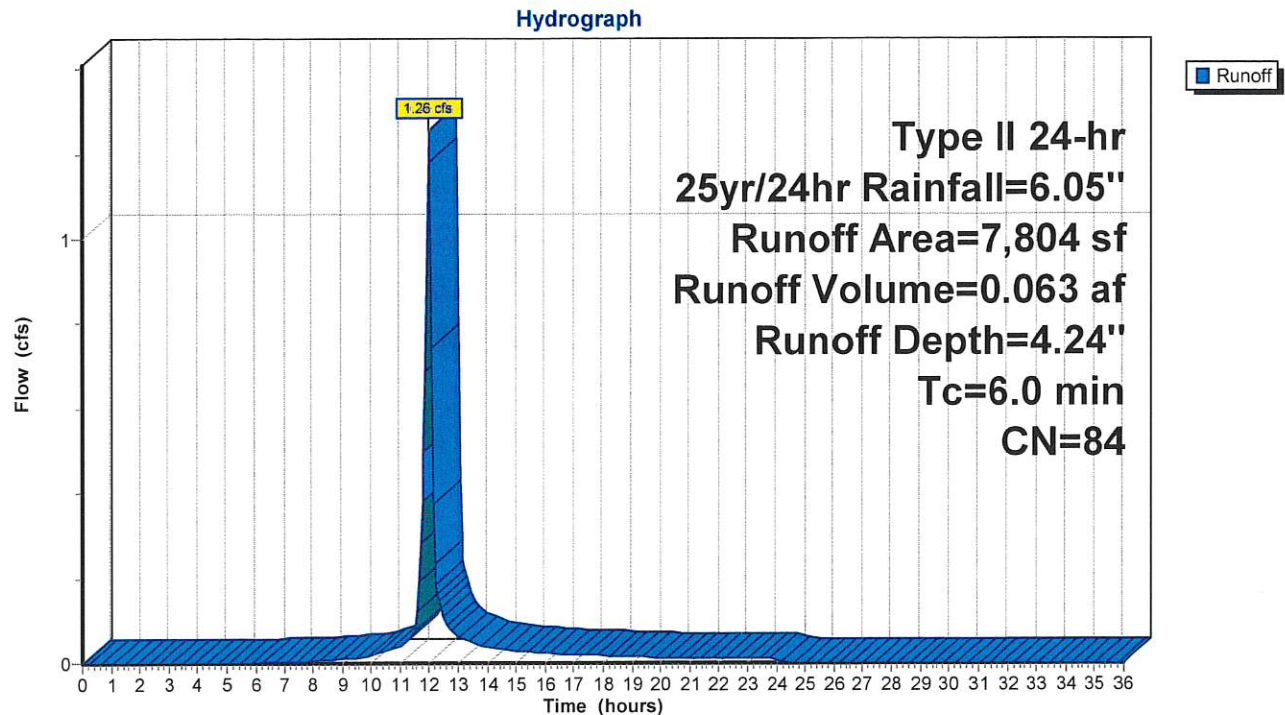
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

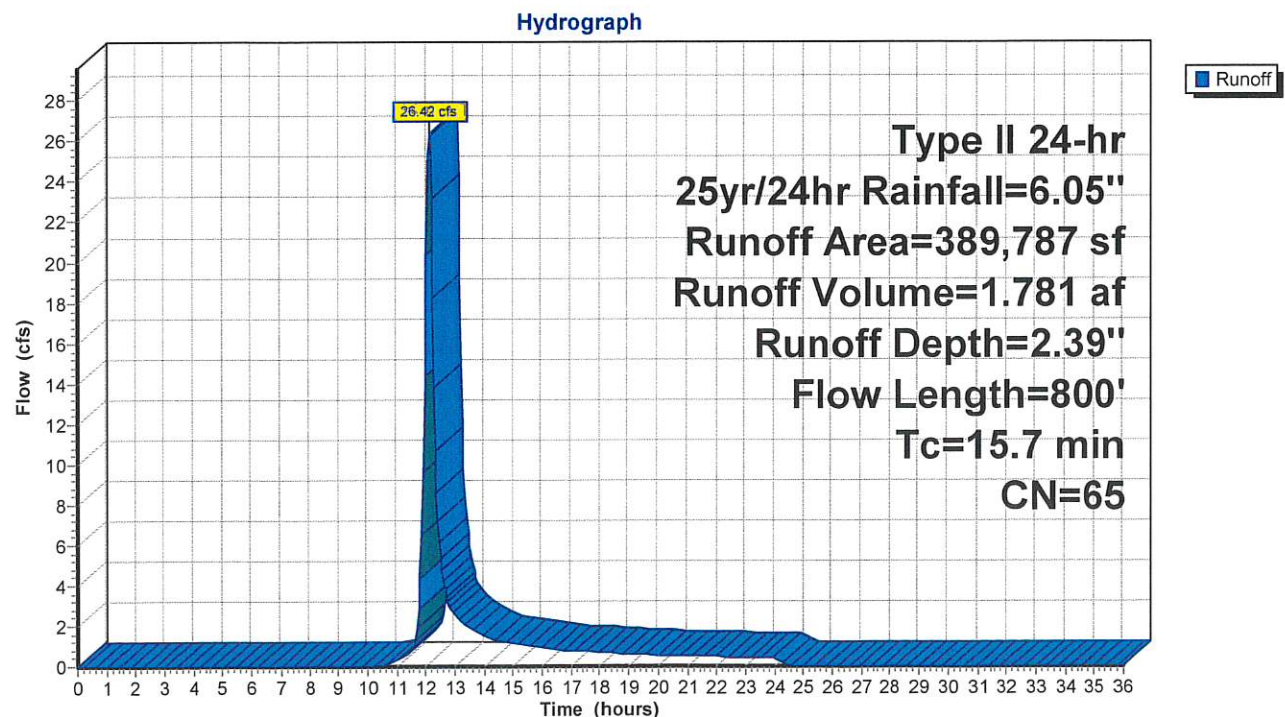
Printed 9/13/2023

Page 44

Subcatchment 9S: To Trench Drain



Subcatchment OS: To Outfall



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

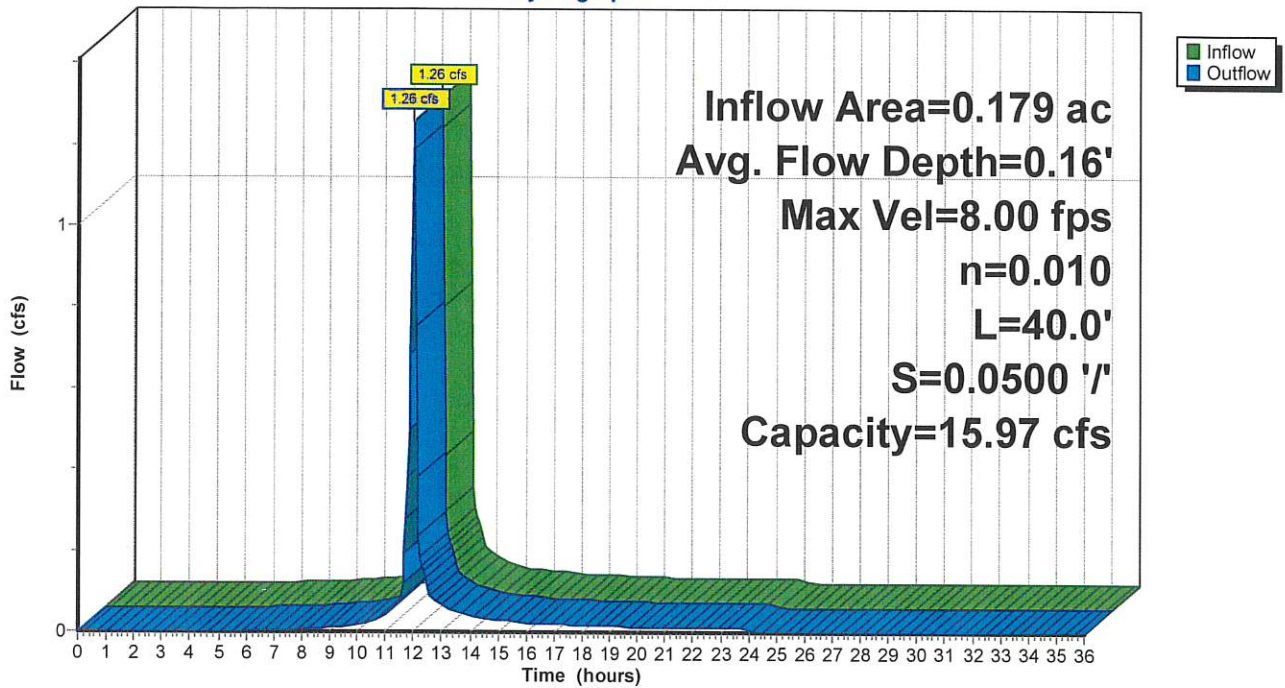
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 45

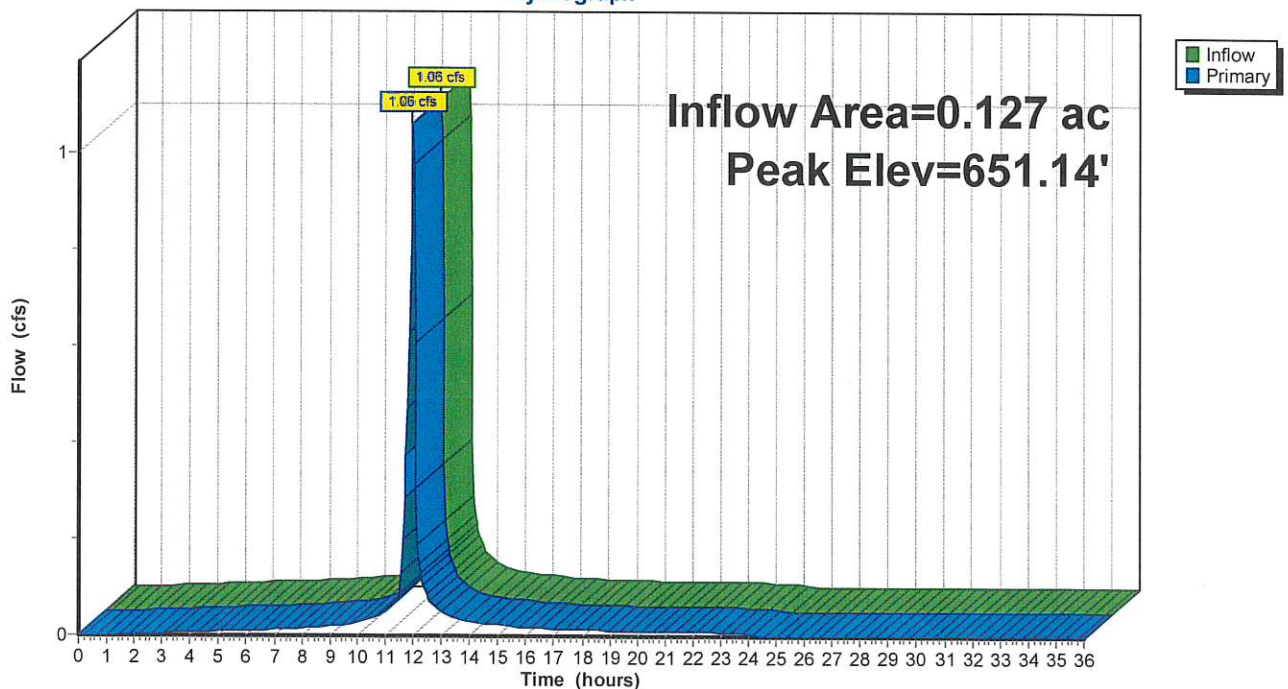
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

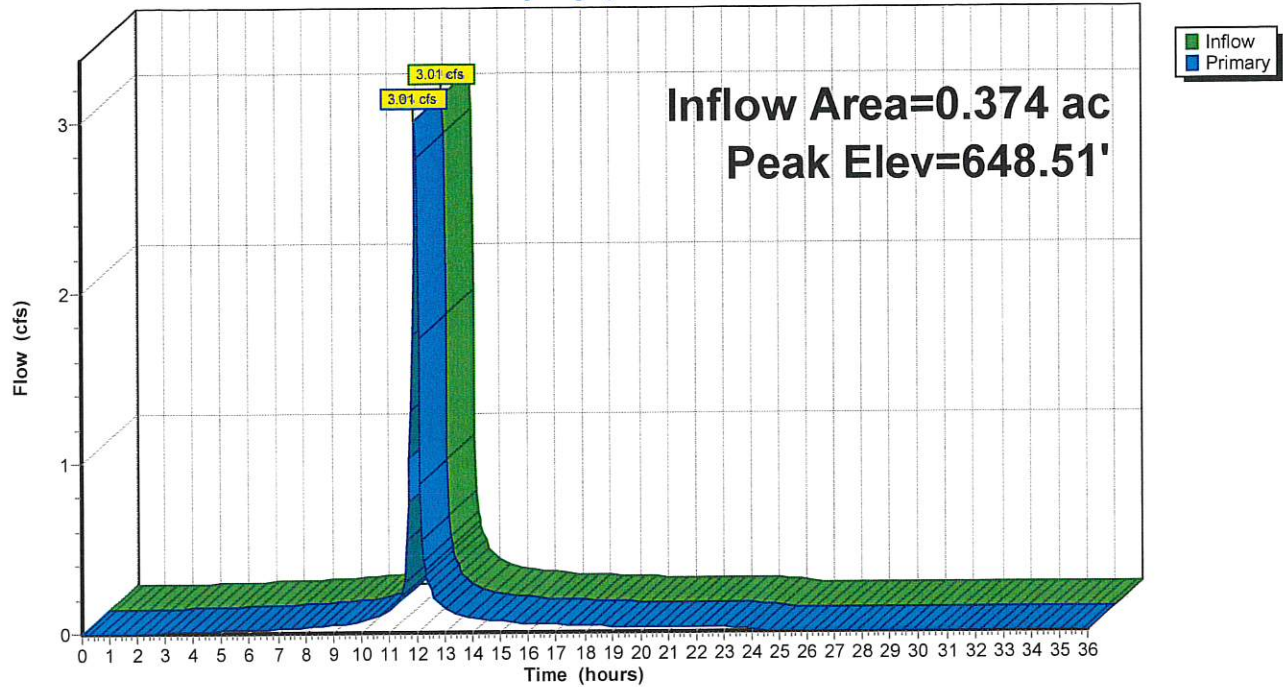
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 46

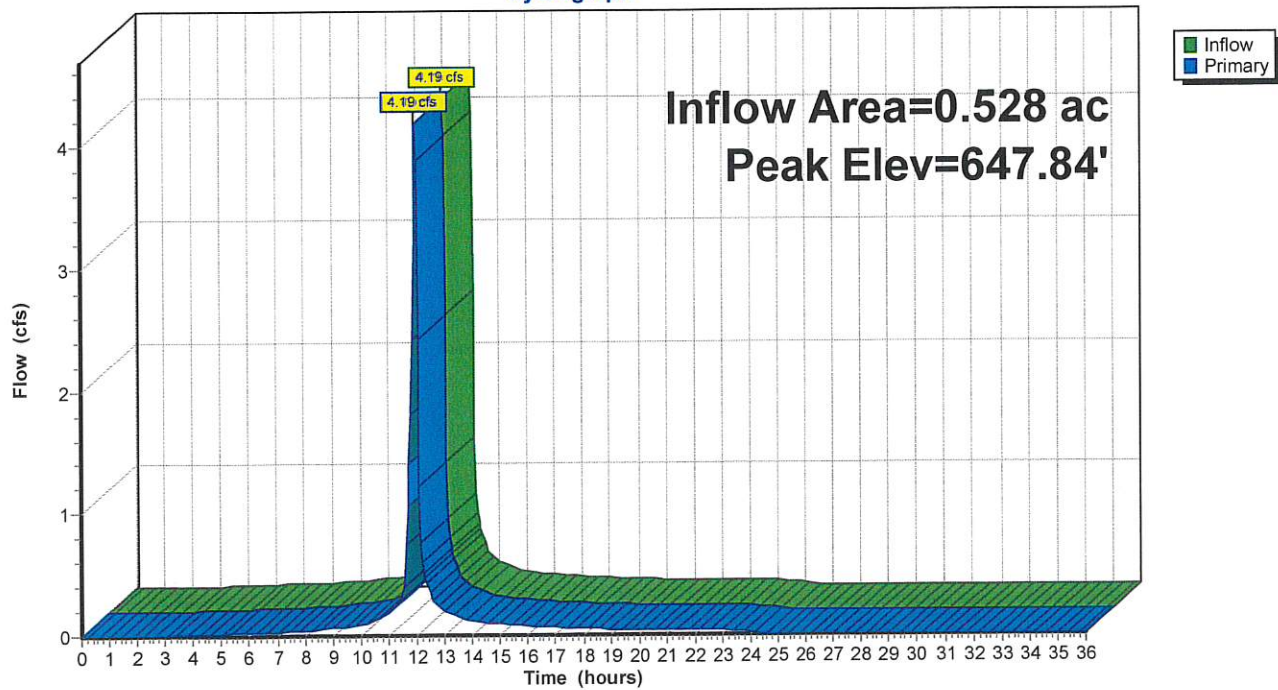
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

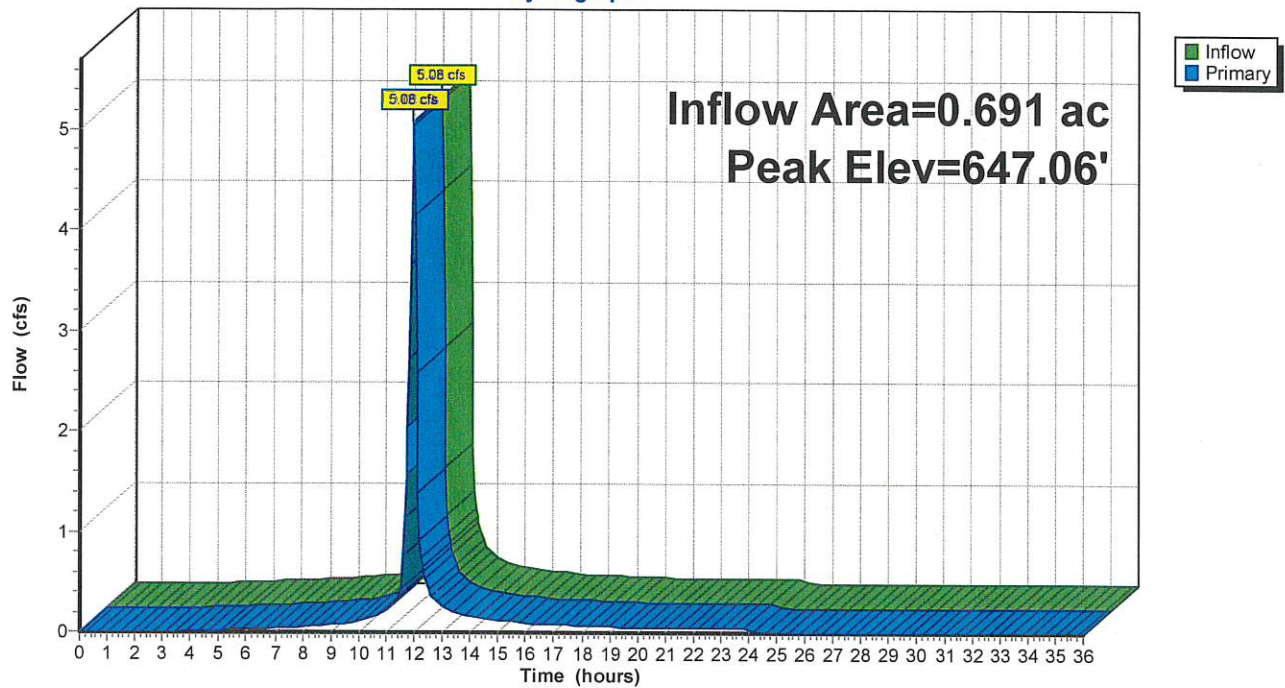
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 47

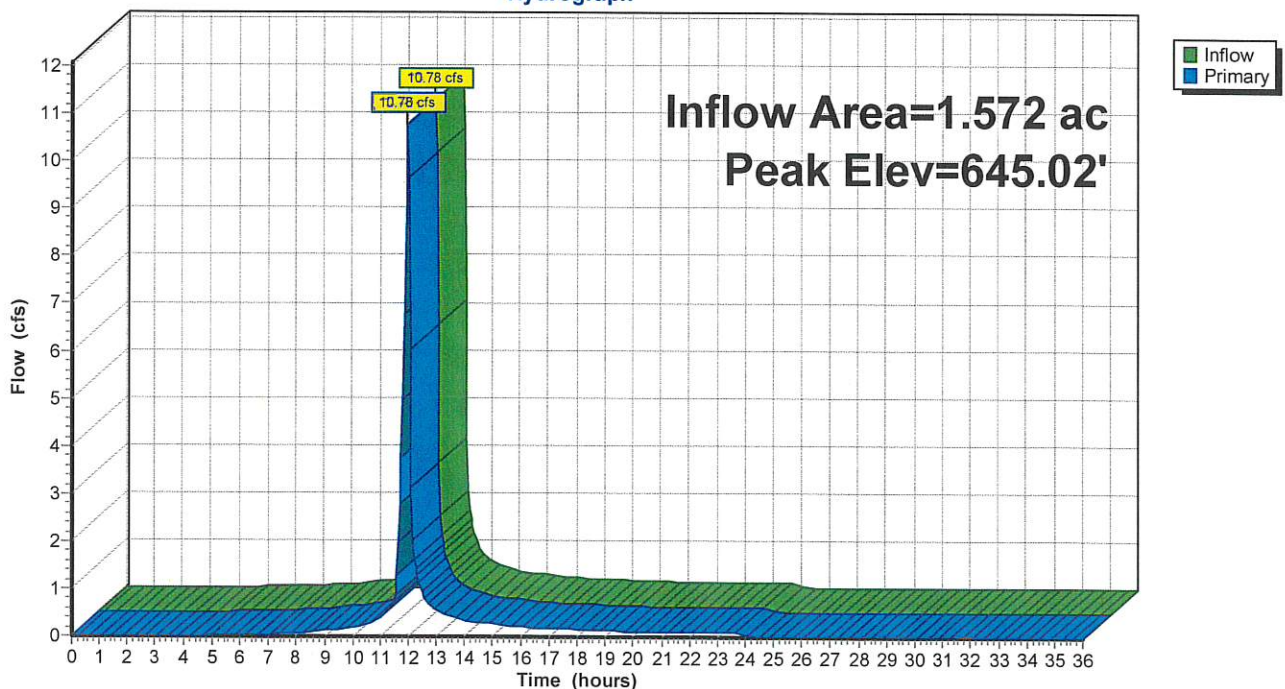
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

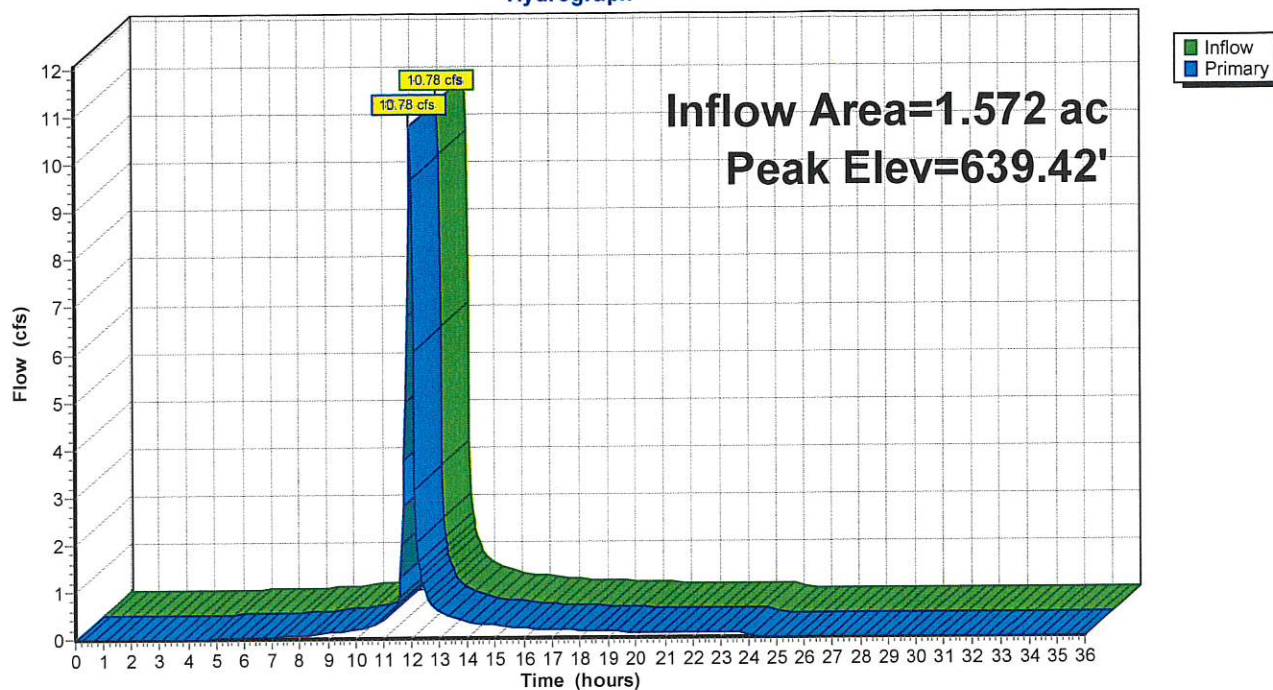
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 48

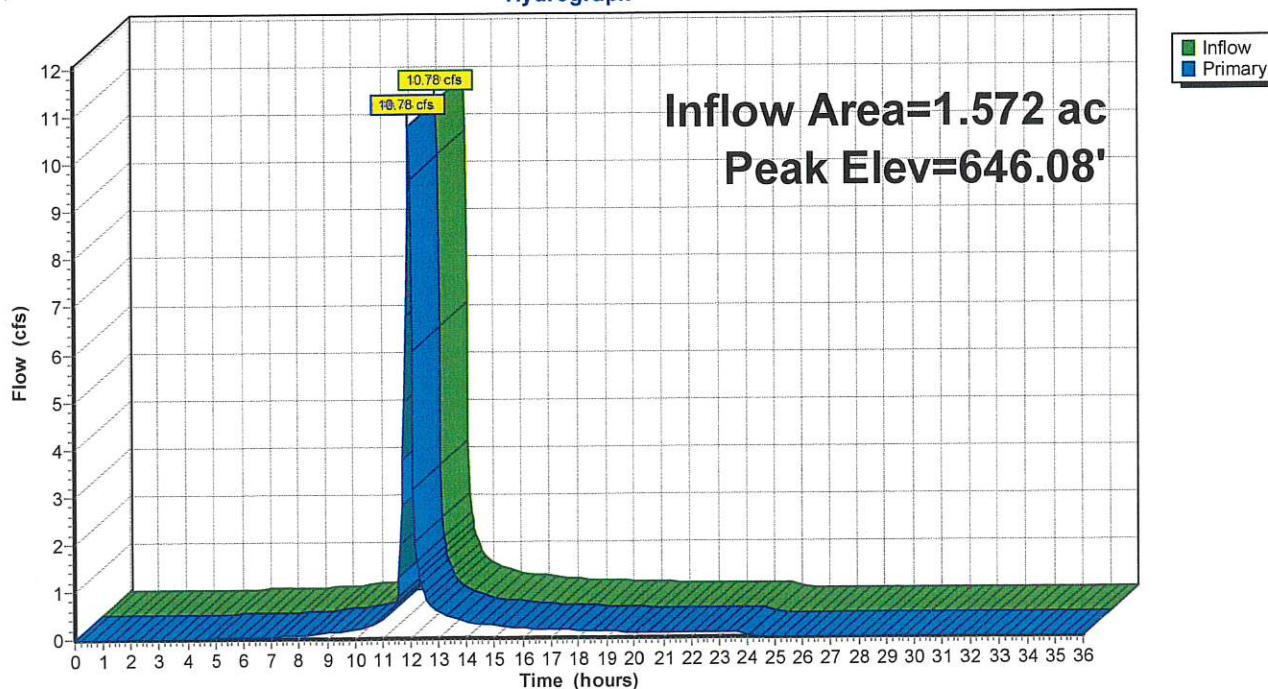
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

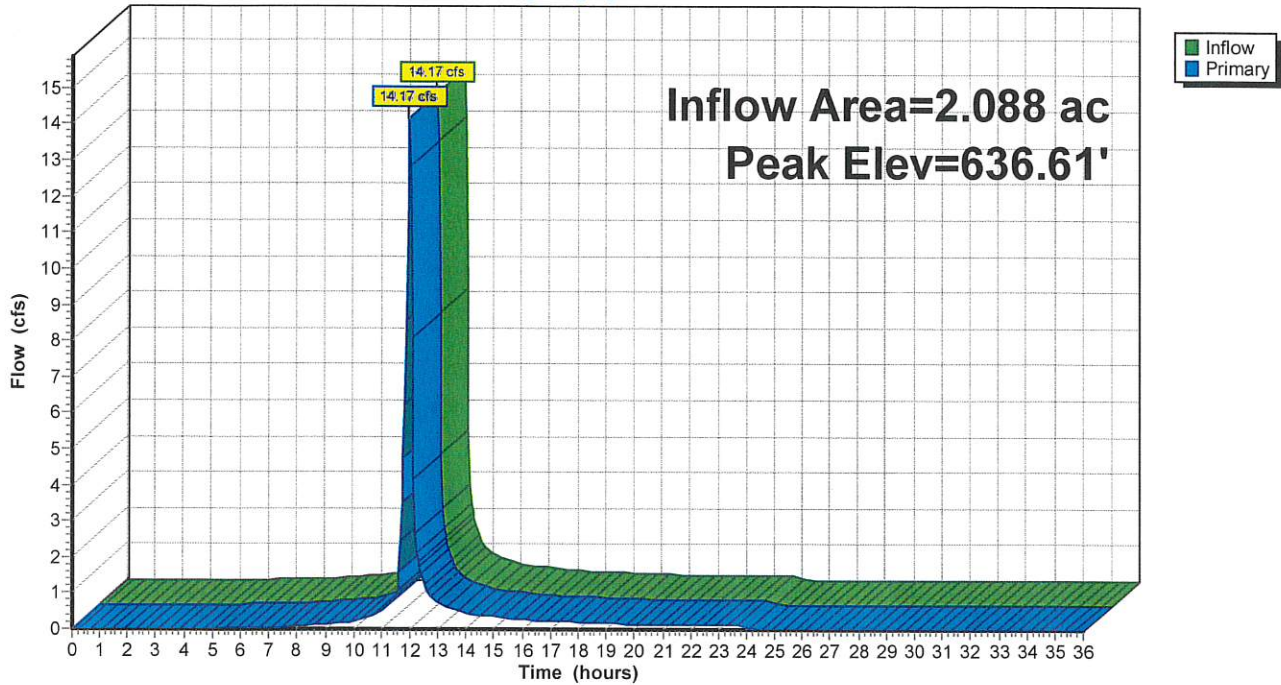
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 49

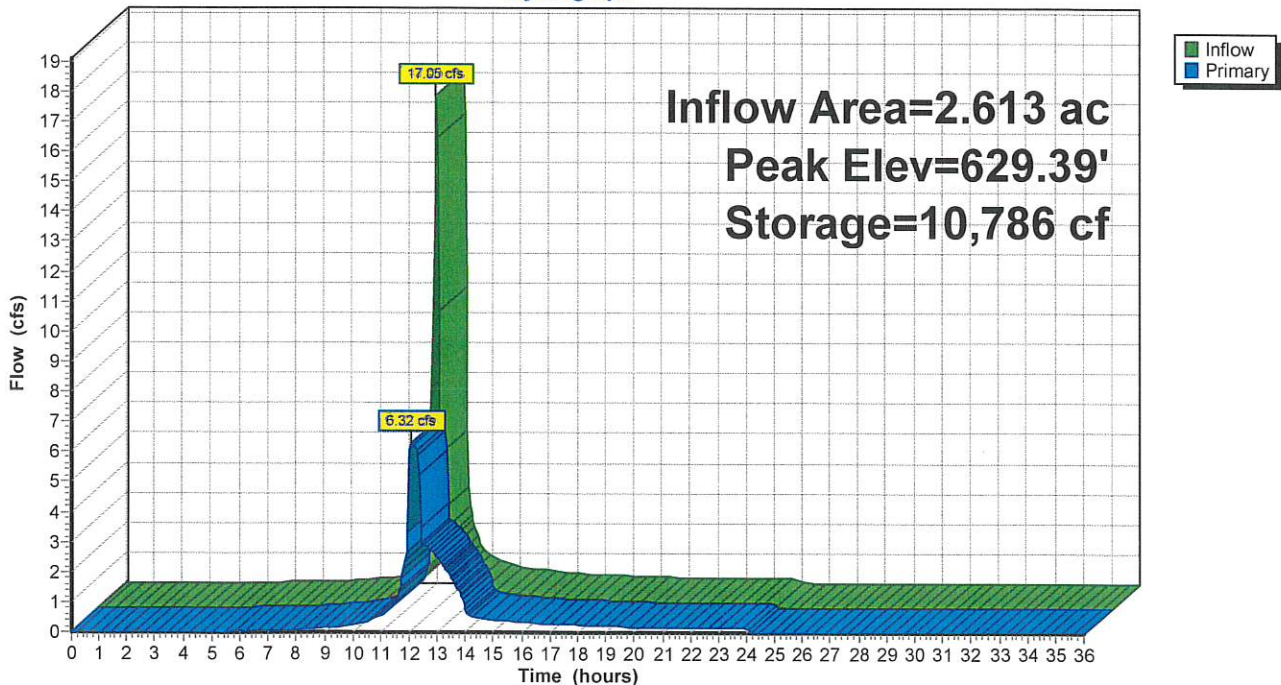
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

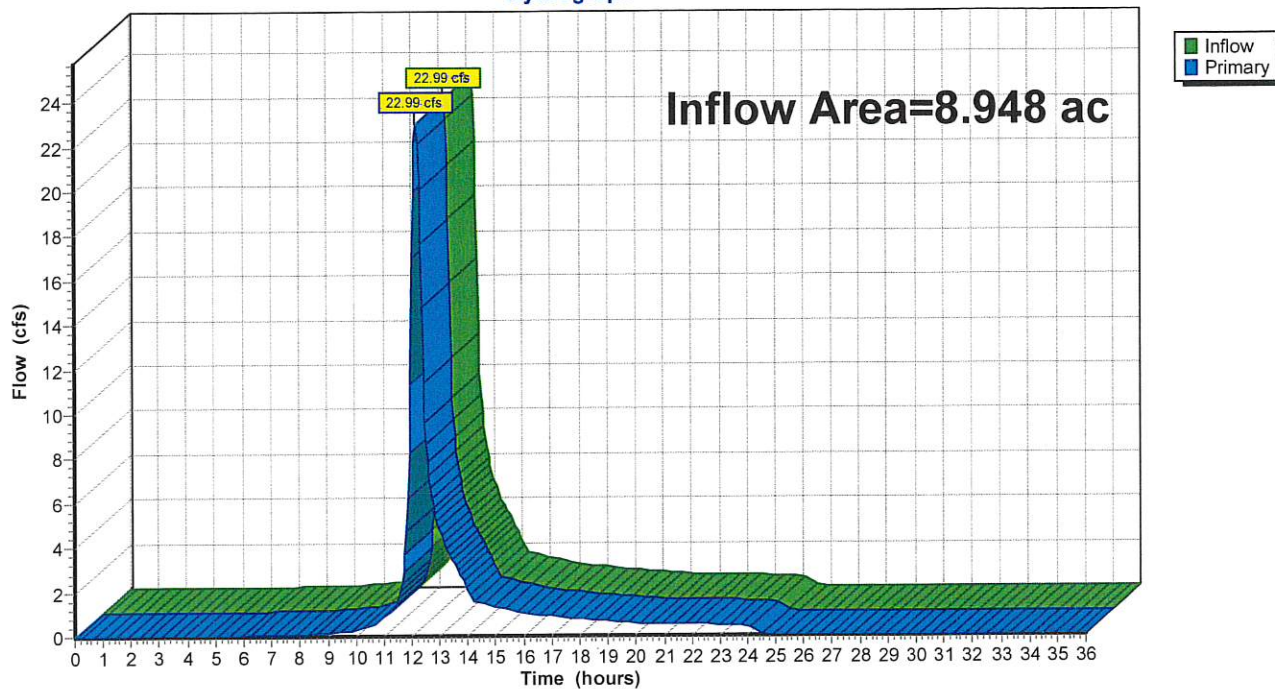
Brookhollow Senior Apartments
Type II 24-hr 25yr/24hr Rainfall=6.05"

Printed 9/13/2023

Page 50

Link 16L: Site Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

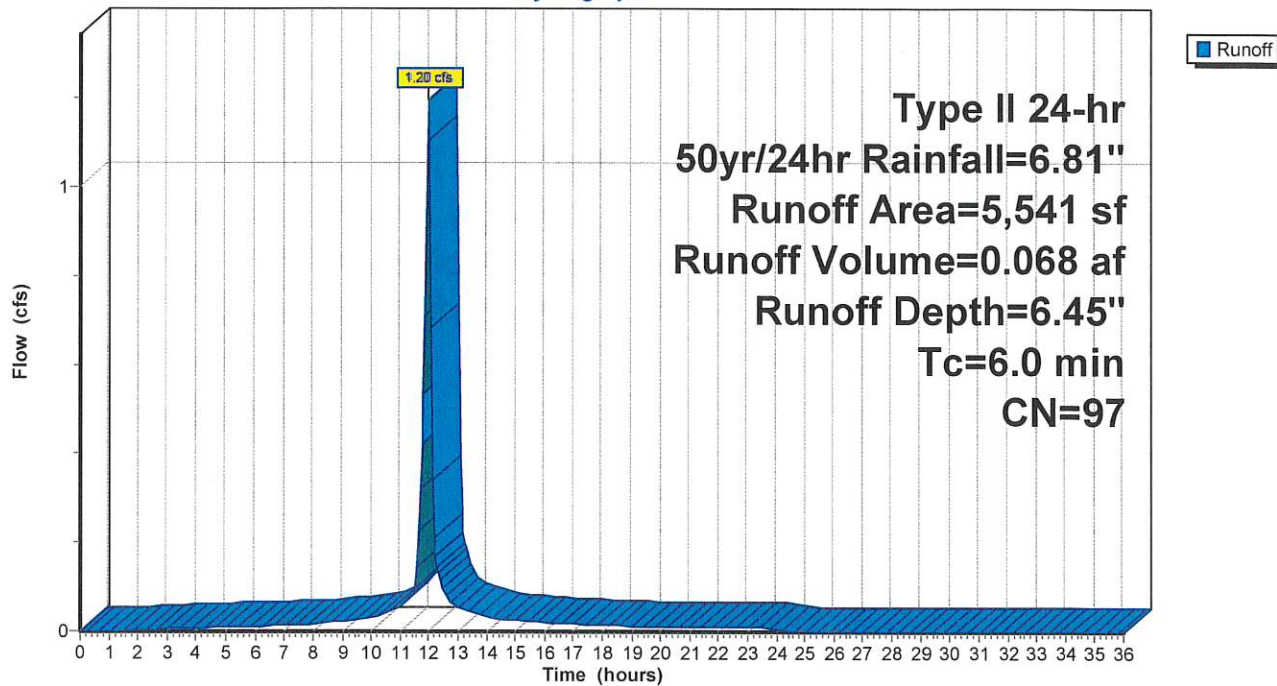
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 51

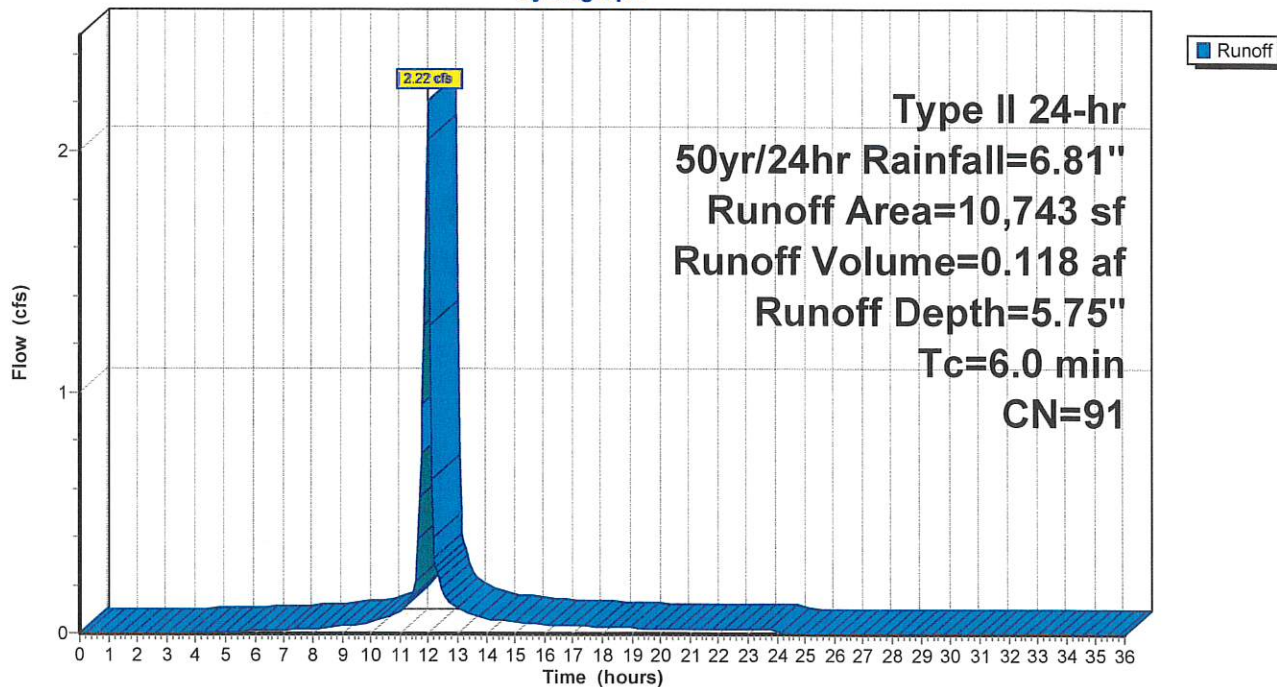
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

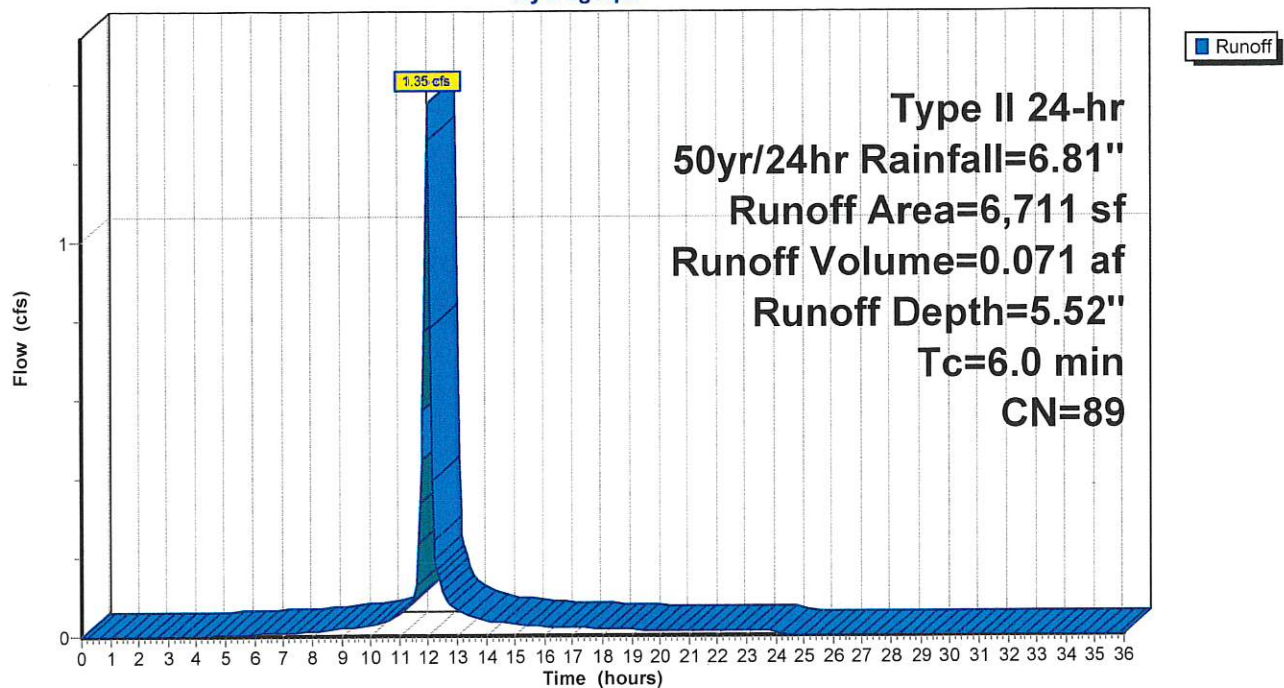
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 52

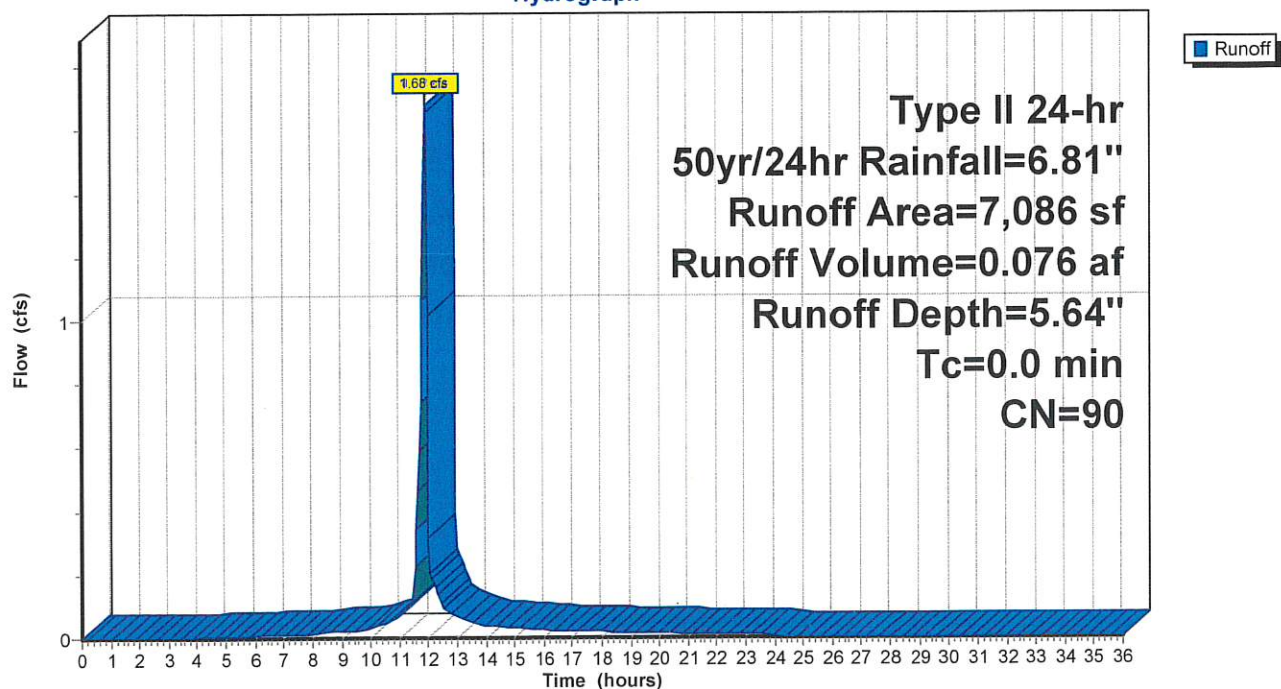
Subcatchment 3S: To CB3

Hydrograph



Subcatchment 4S: To CB4

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

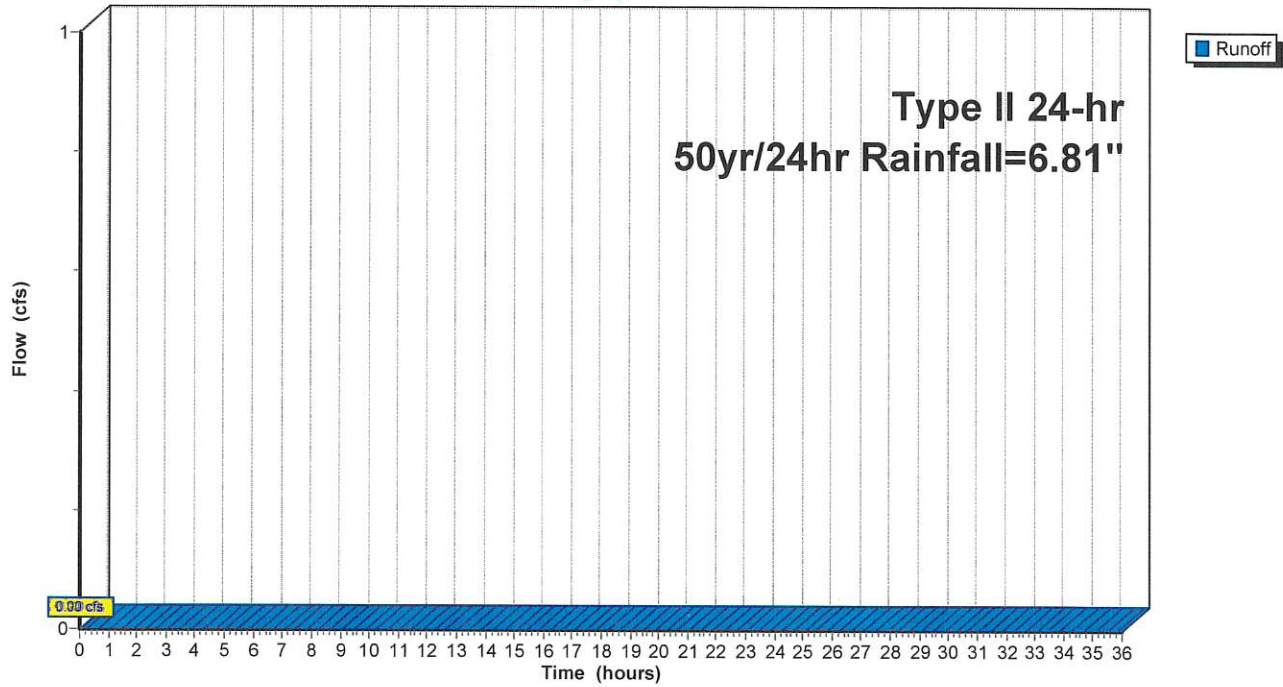
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 53

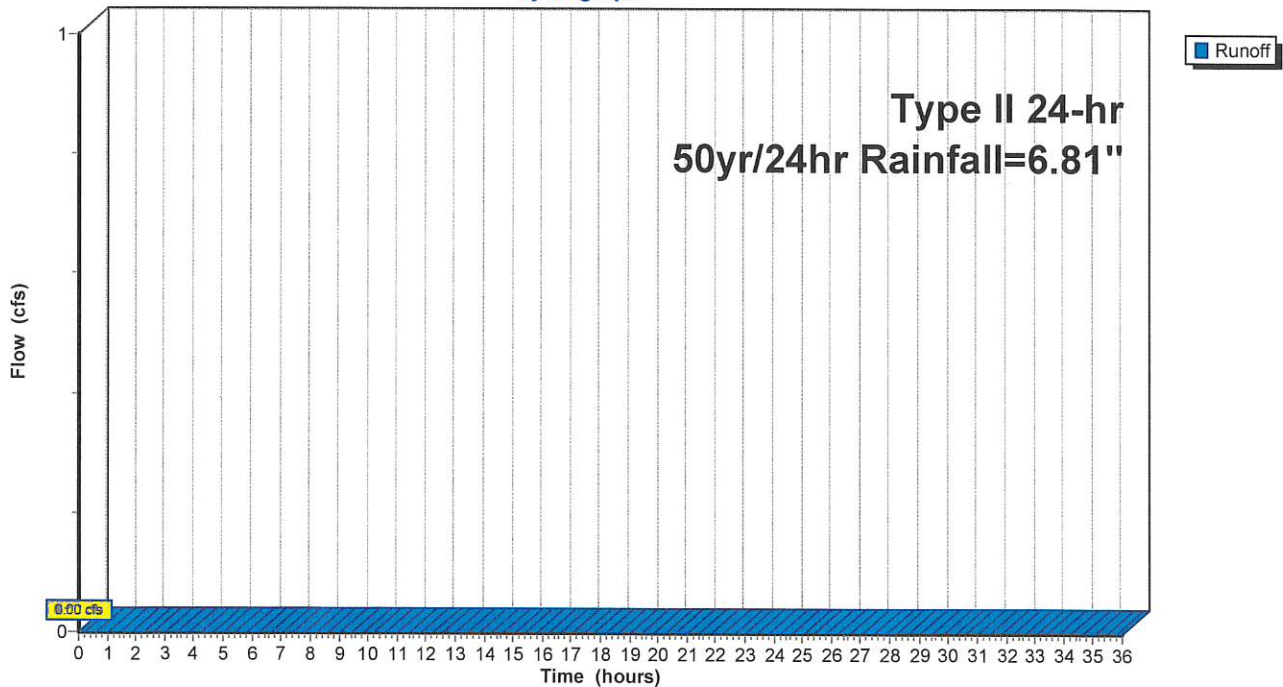
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

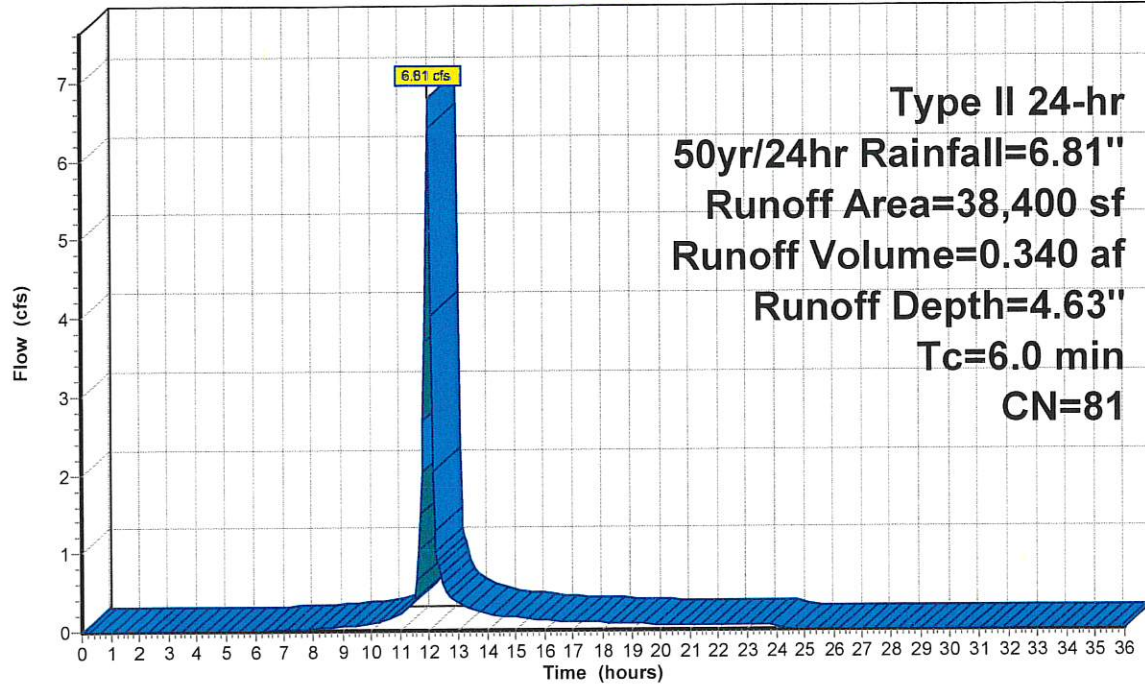
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 54

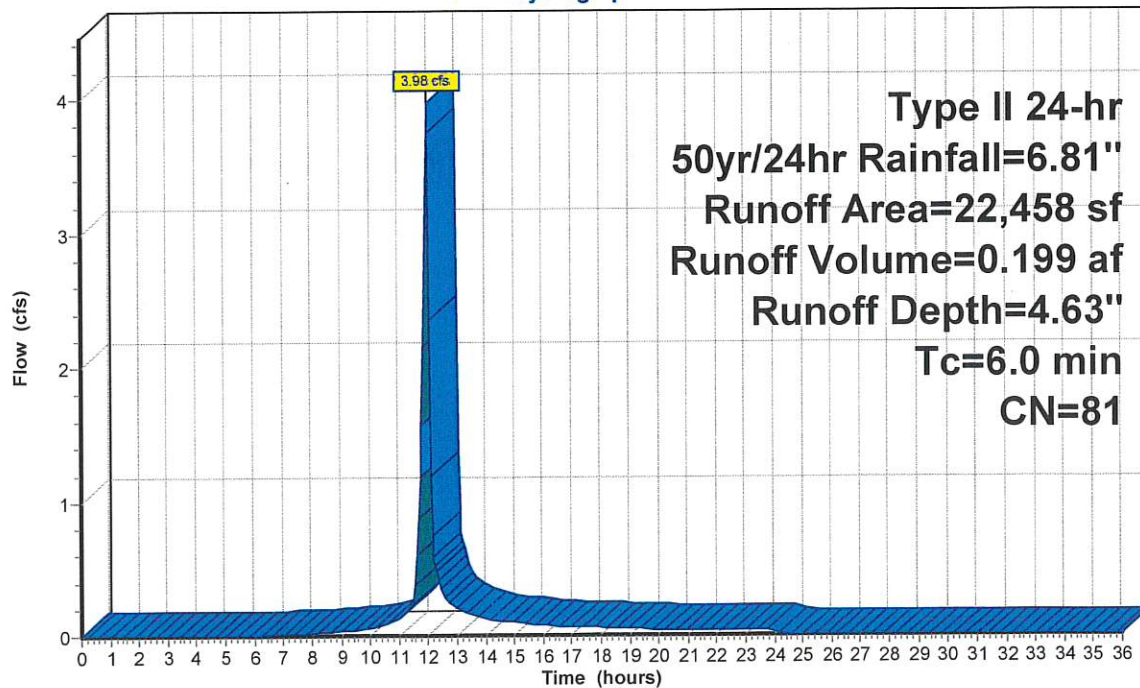
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

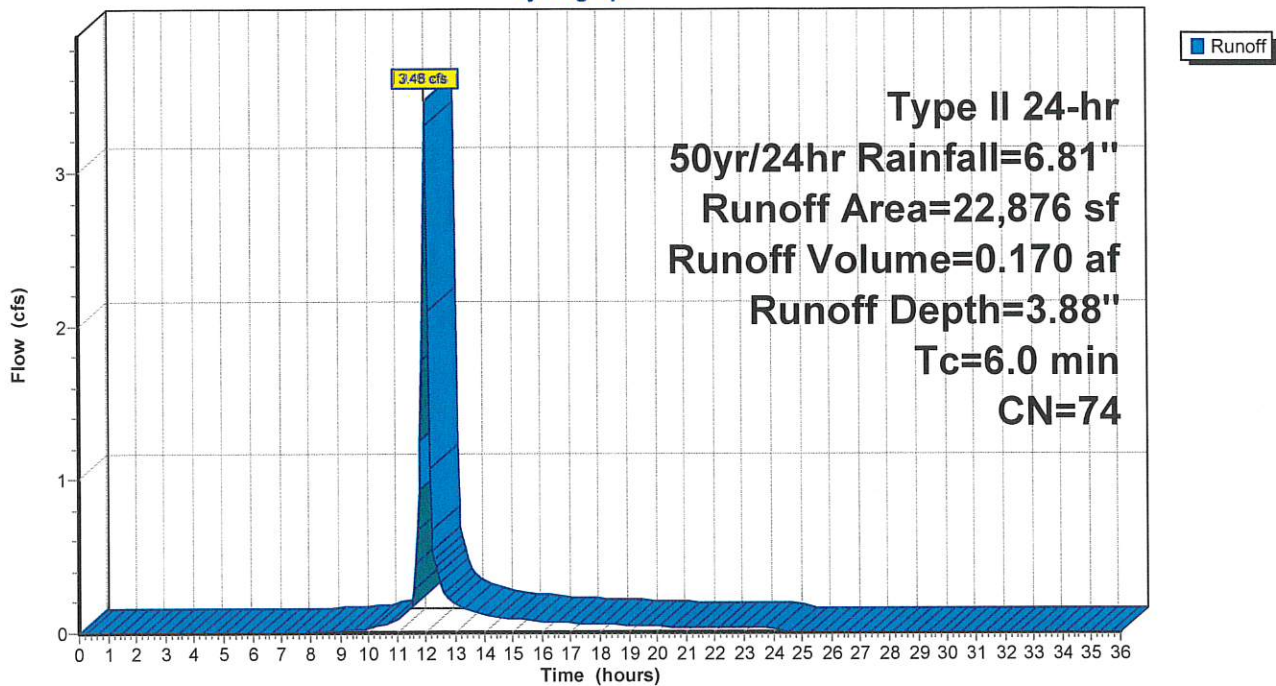
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 55

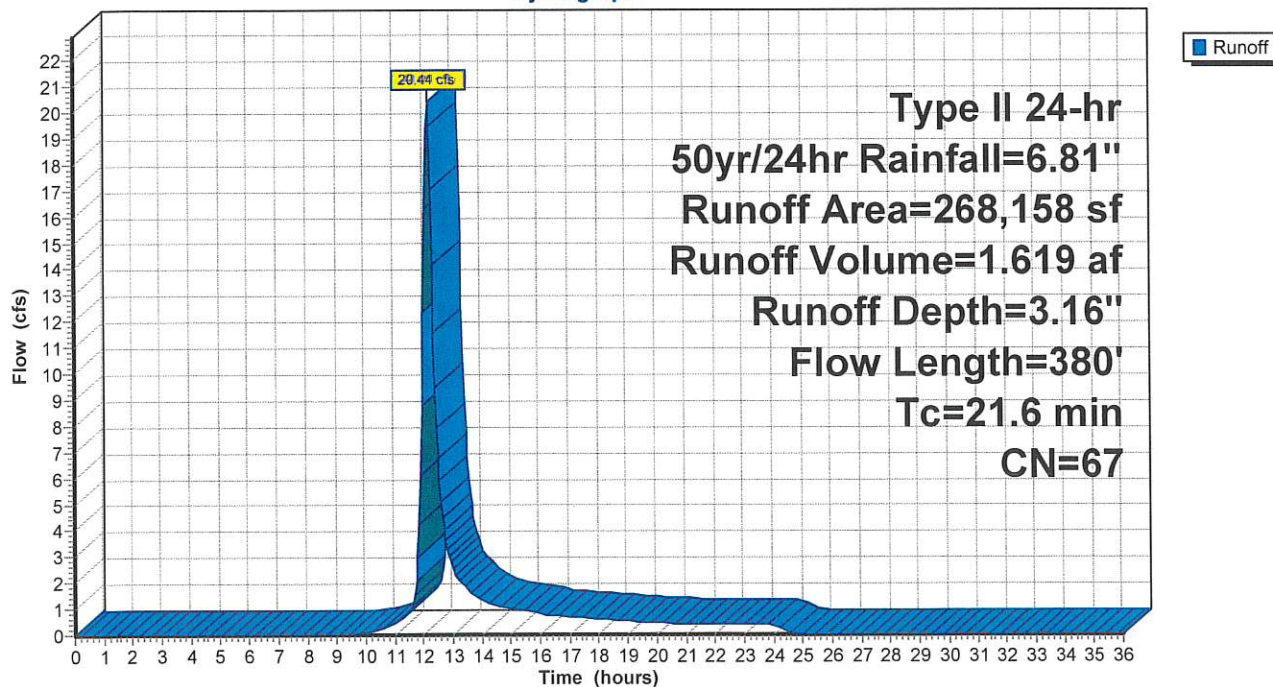
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

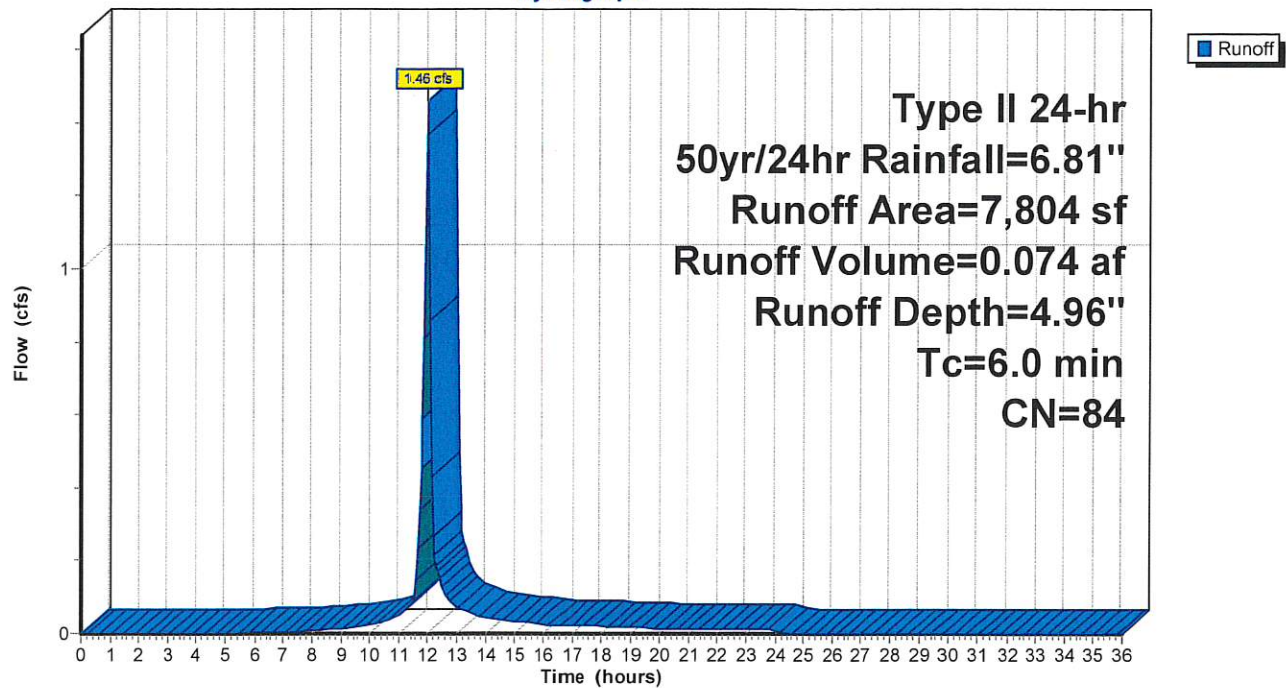
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 56

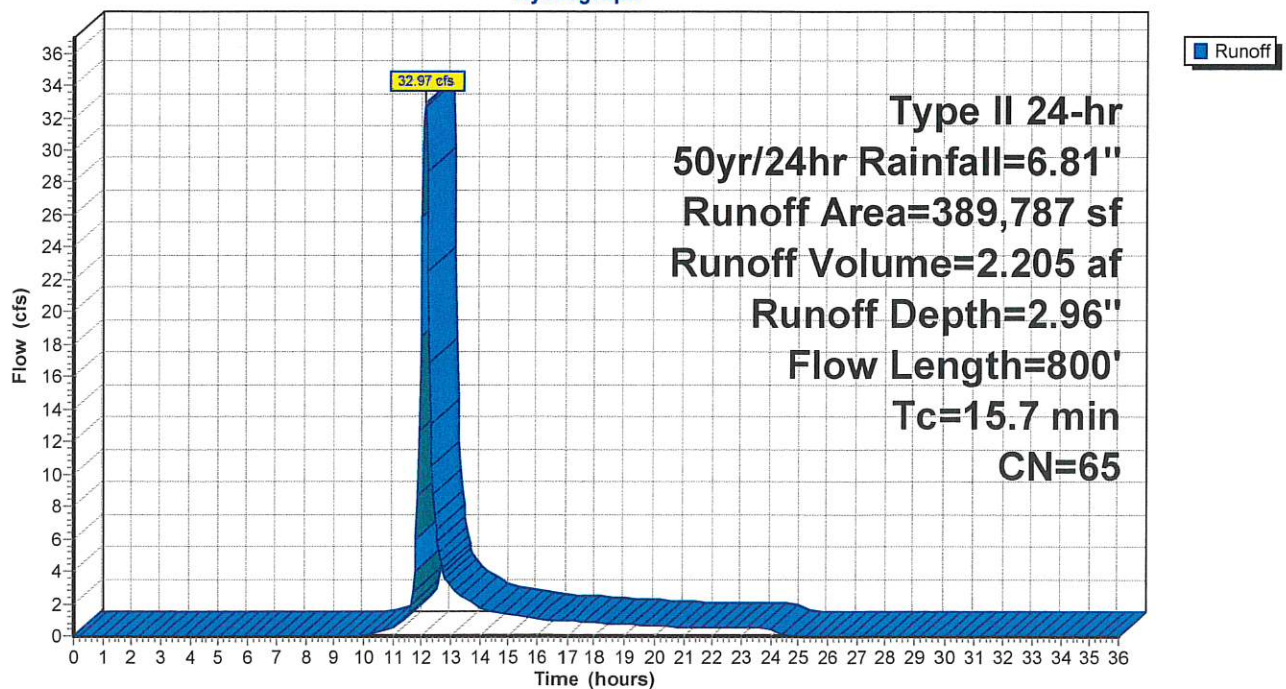
Subcatchment 9S: To Trench Drain

Hydrograph



Subcatchment OS: To Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

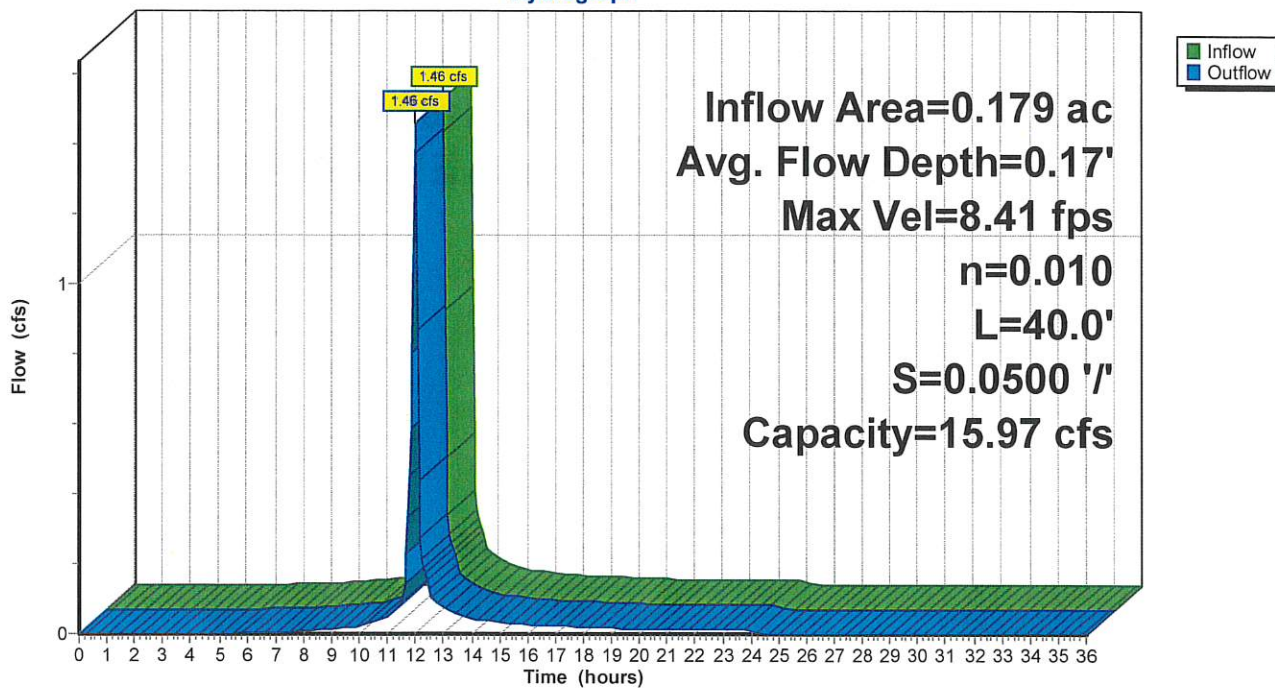
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 57

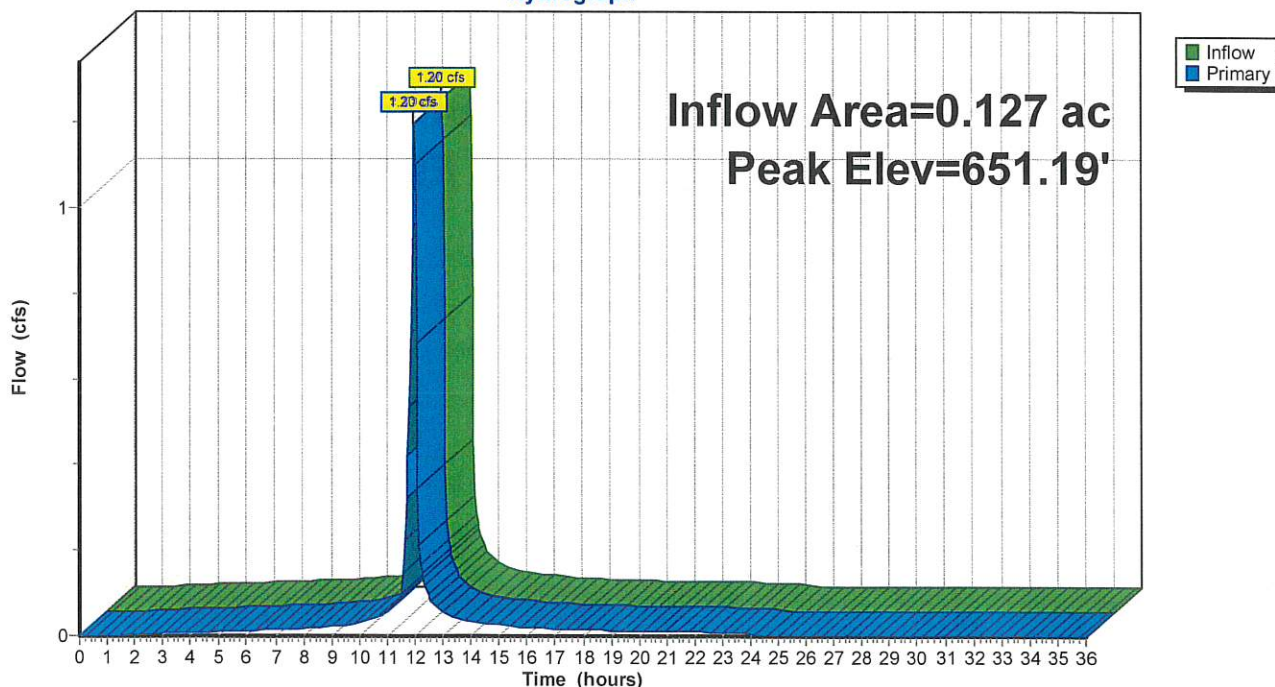
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

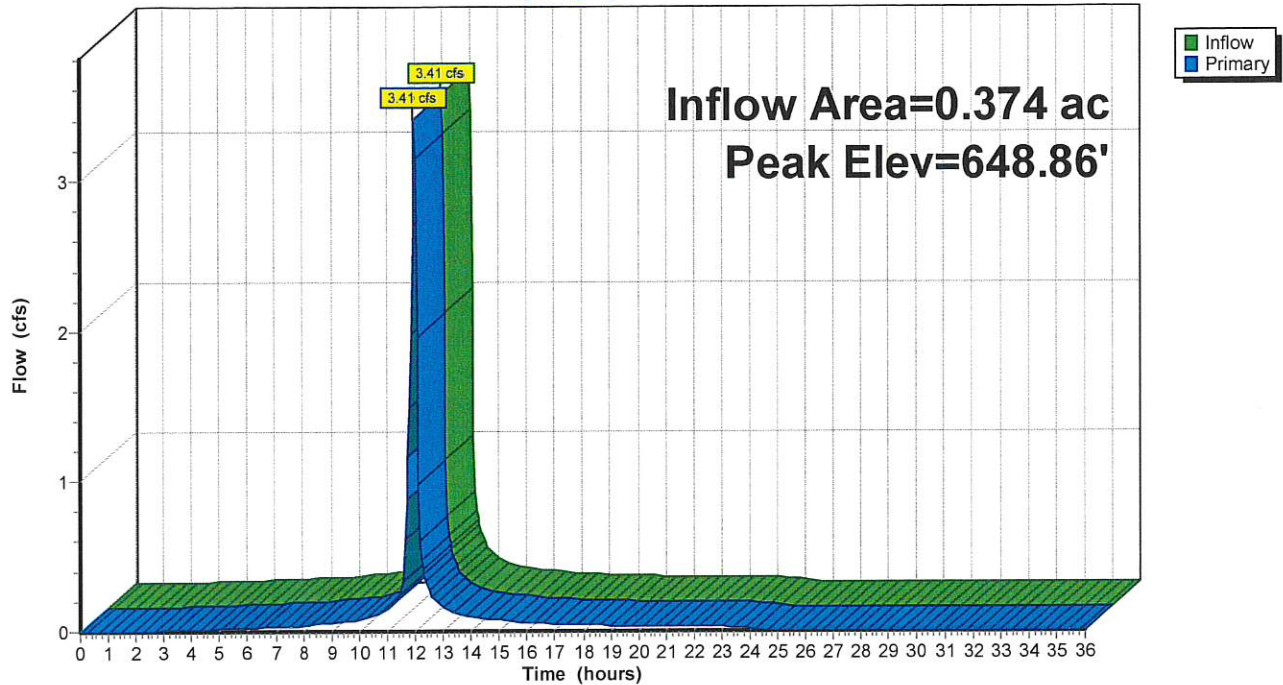
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 58

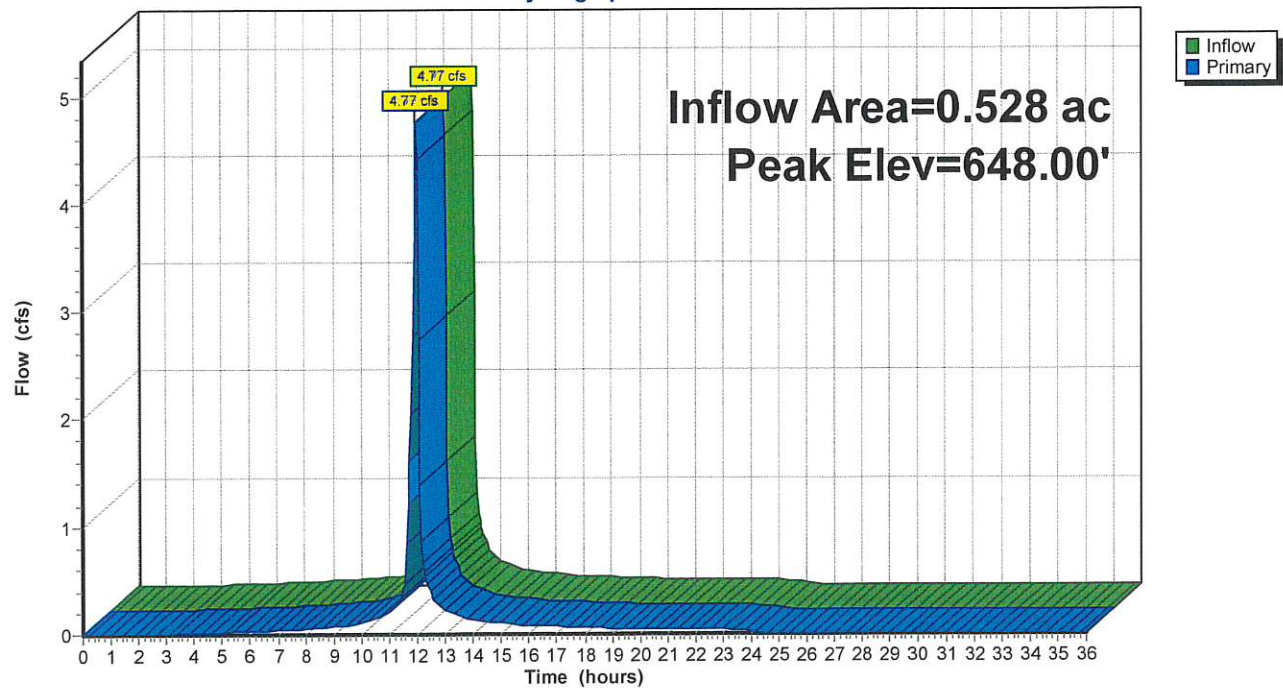
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

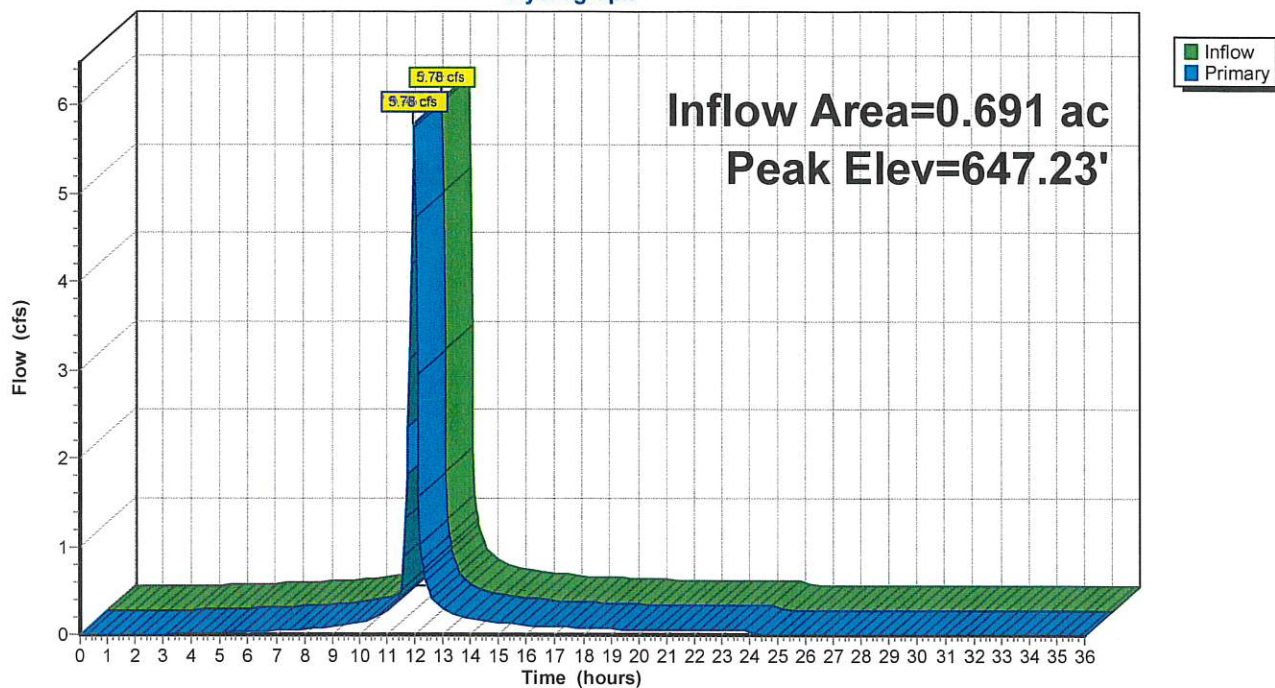
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 59

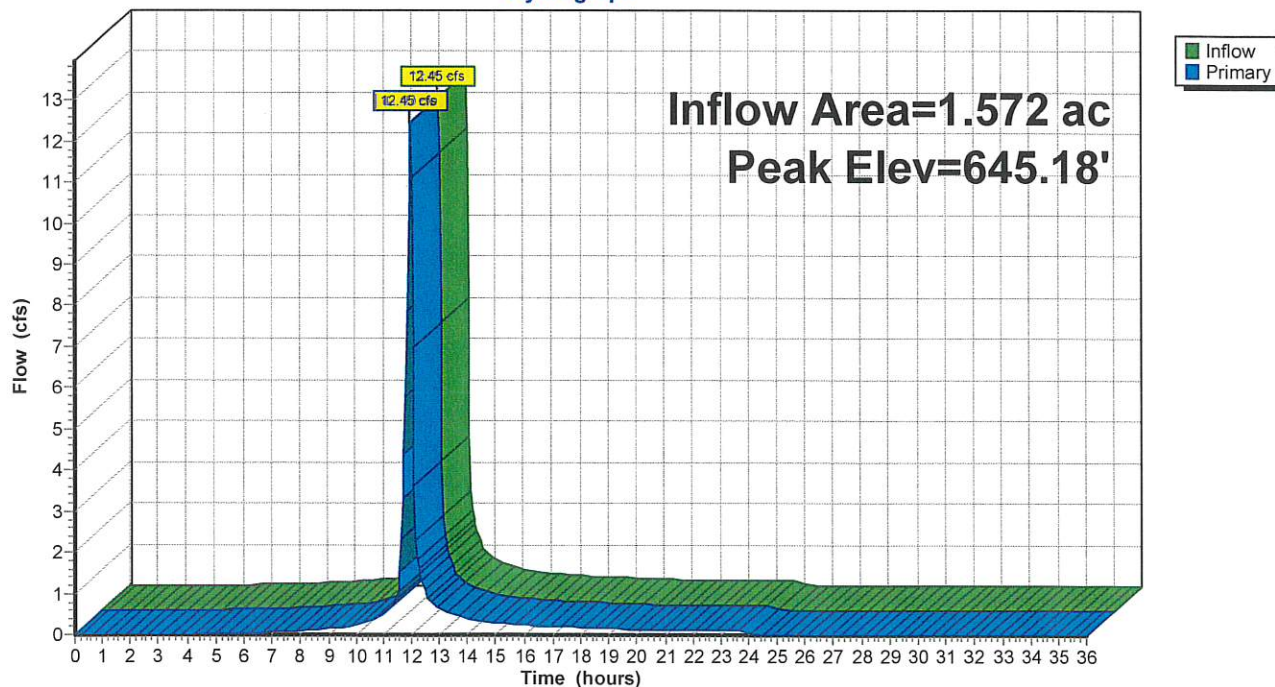
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

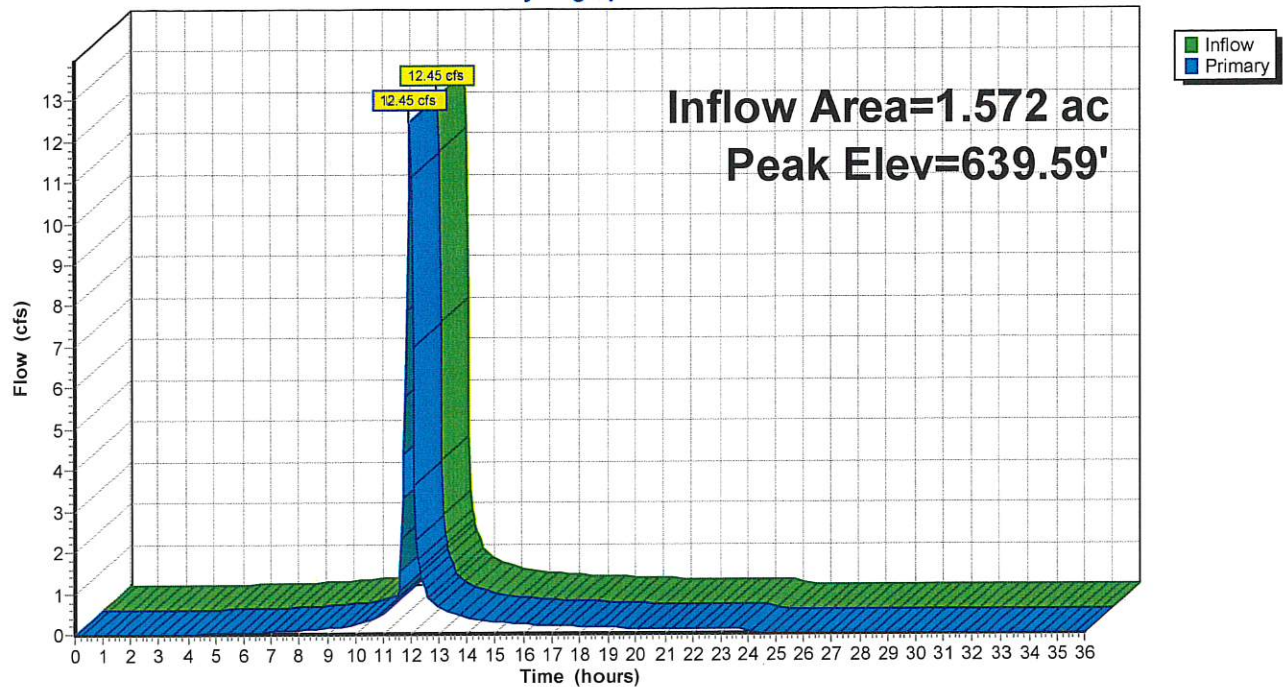
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 60

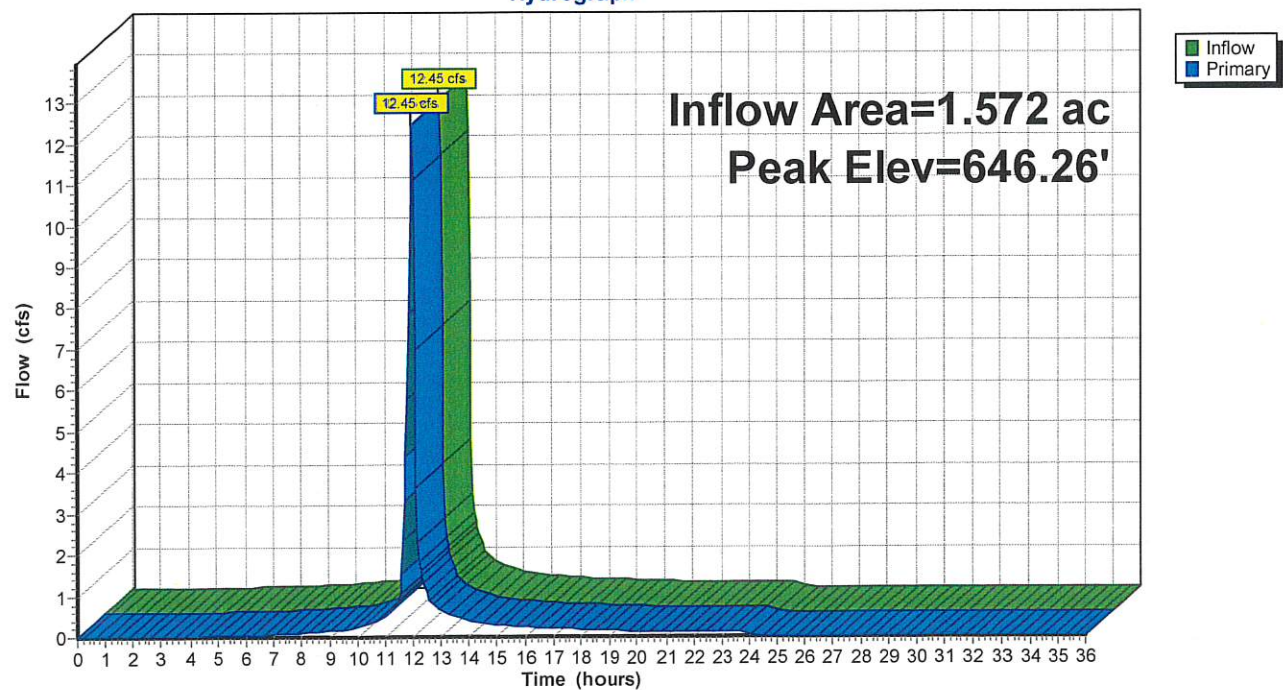
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

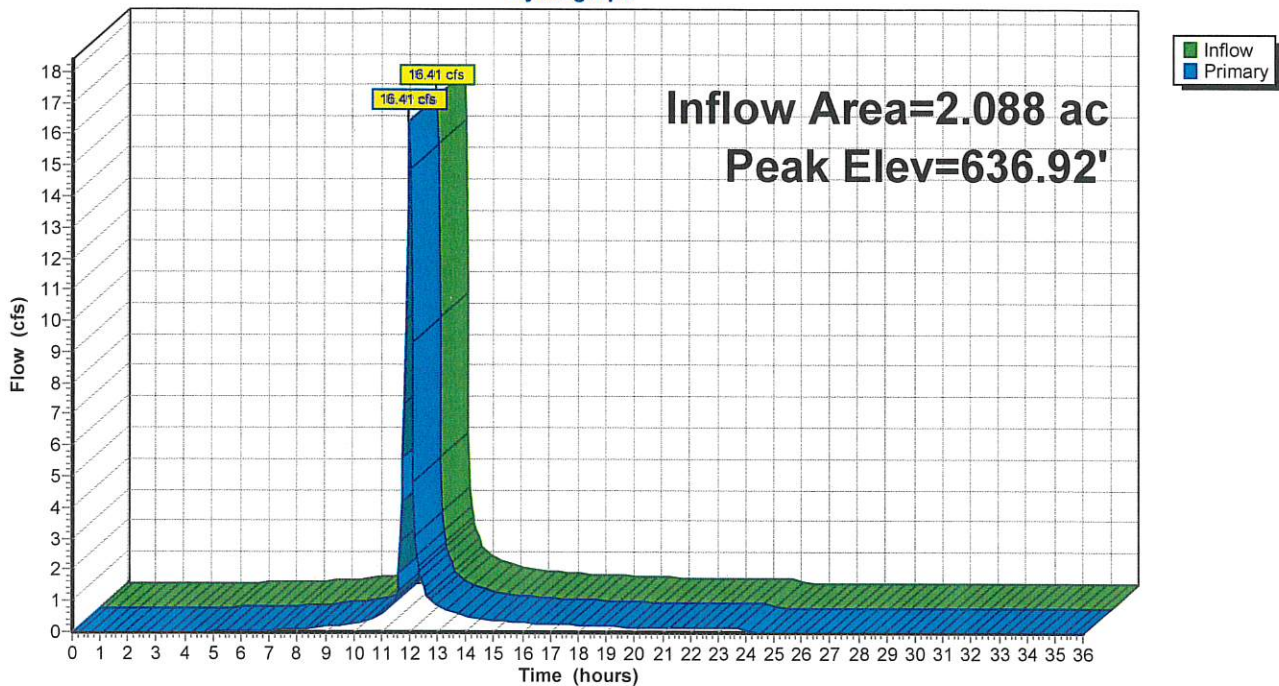
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 61

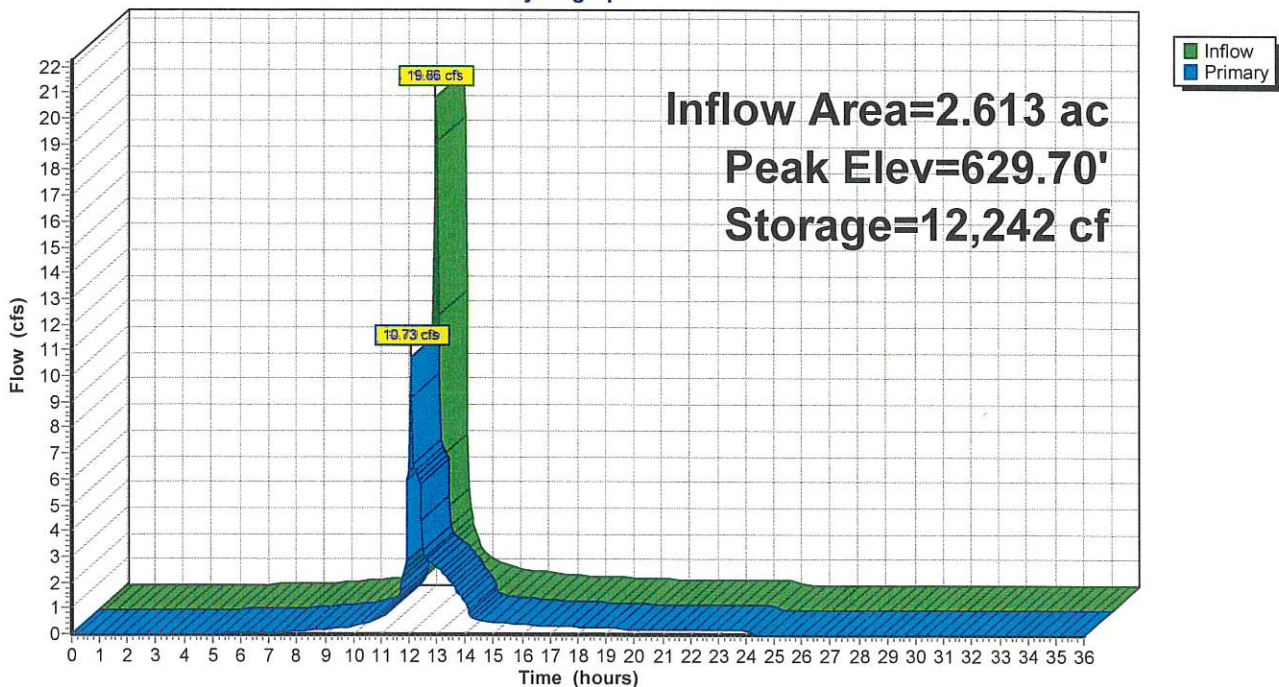
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

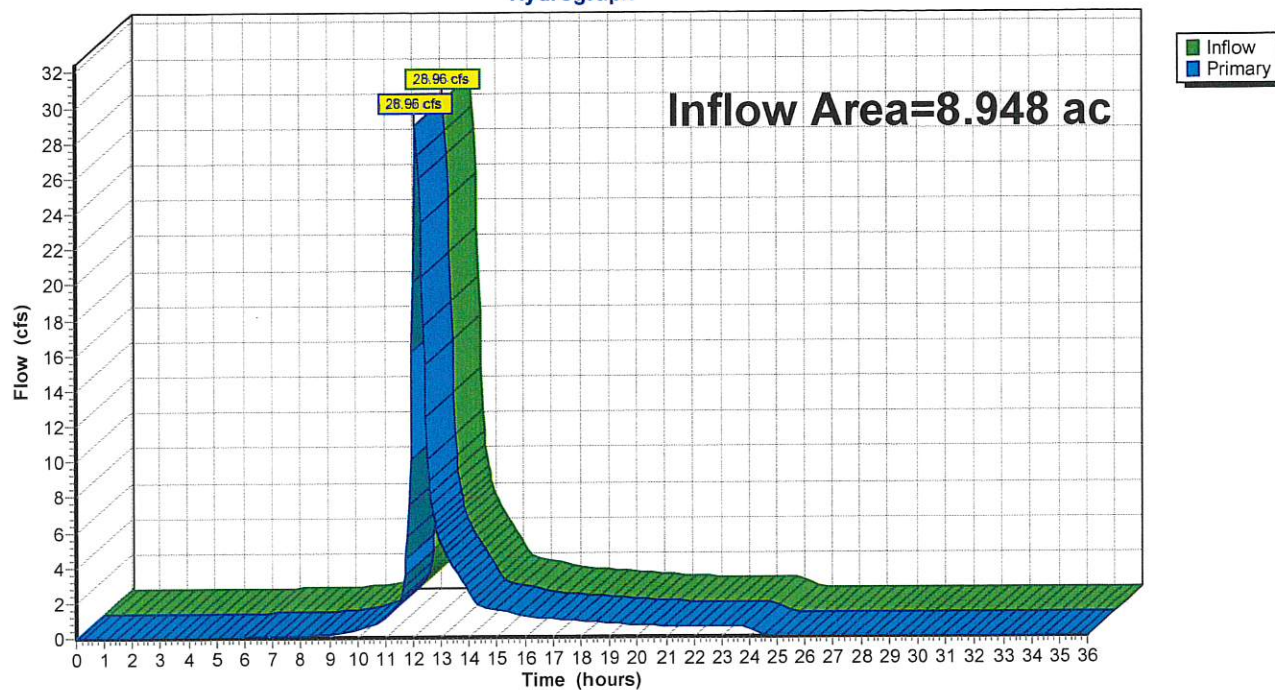
Brookhollow Senior Apartments
Type II 24-hr 50yr/24hr Rainfall=6.81"

Printed 9/13/2023

Page 62

Link 16L: Site Outfall

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

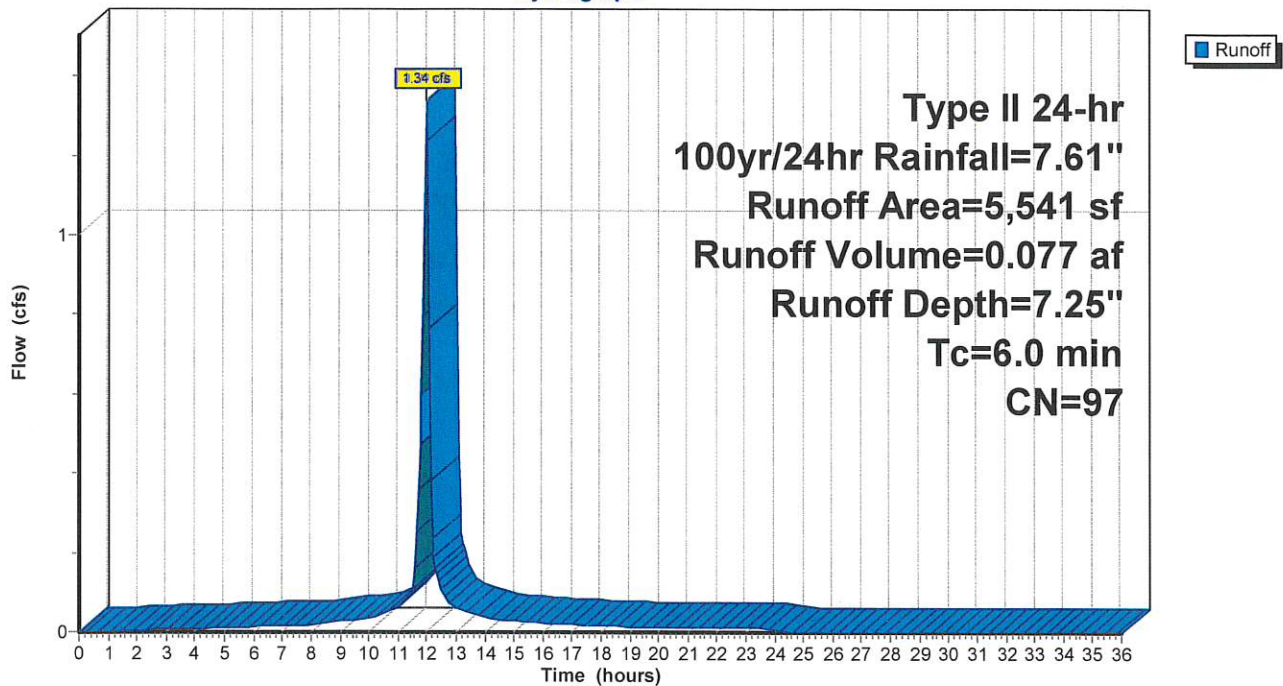
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 63

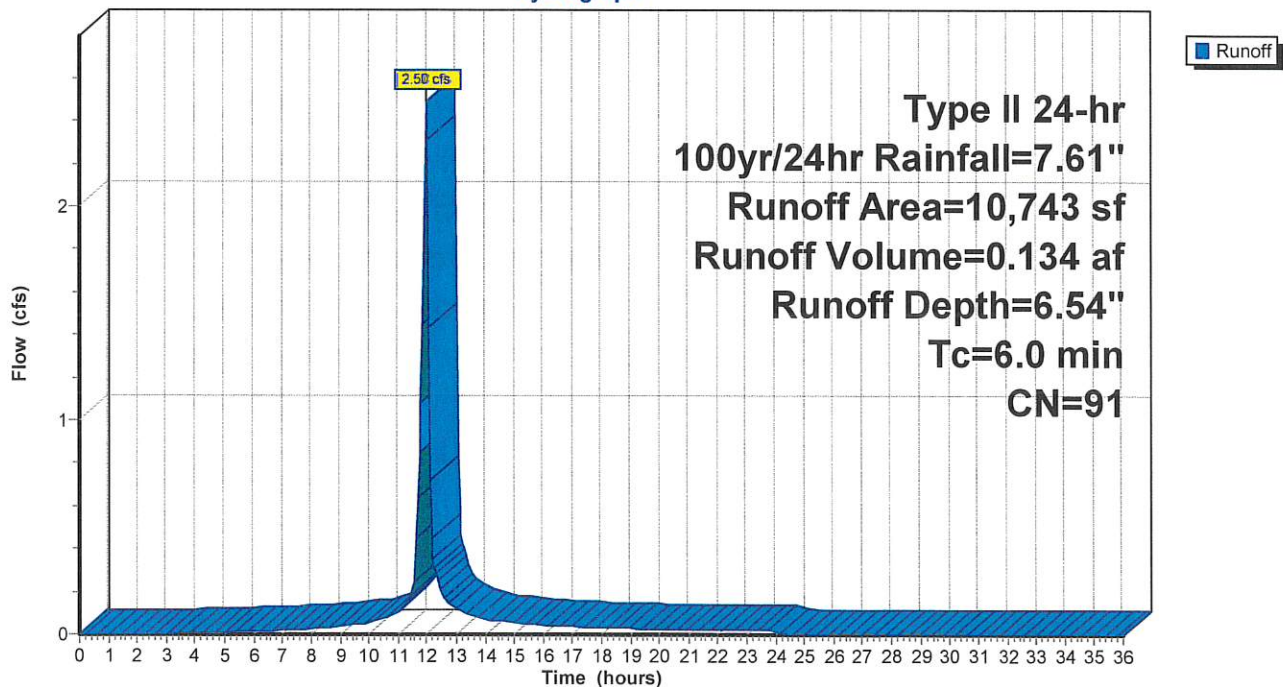
Subcatchment 1S: To CB1

Hydrograph



Subcatchment 2S: To CB2

Hydrograph



Runoff

Prepared by {enter your company name here}

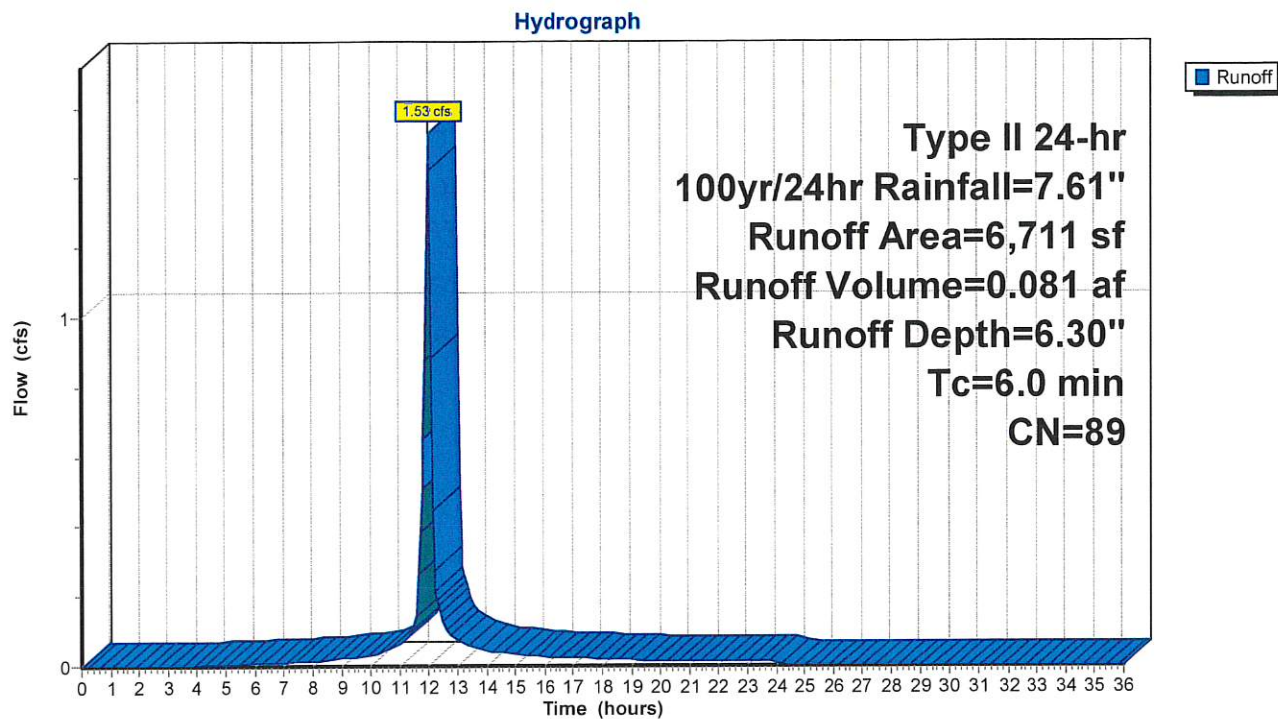
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

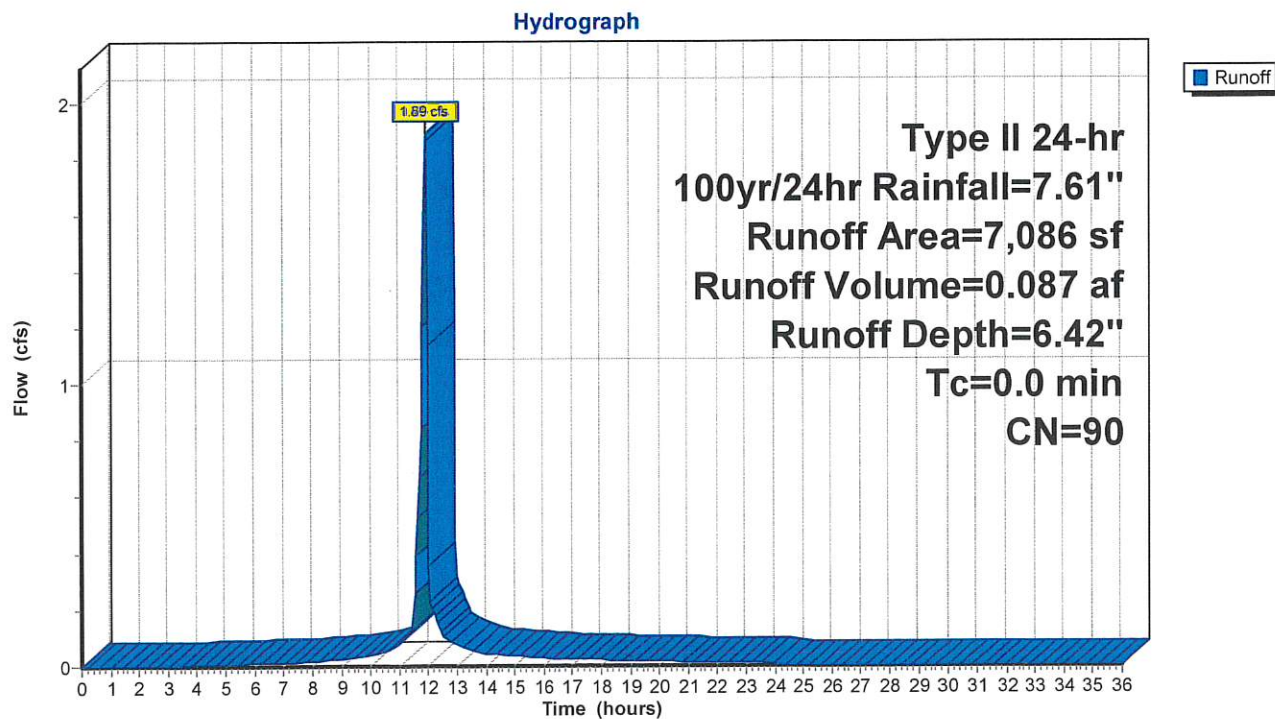
Printed 9/13/2023

Page 64

Subcatchment 3S: To CB3



Subcatchment 4S: To CB4



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

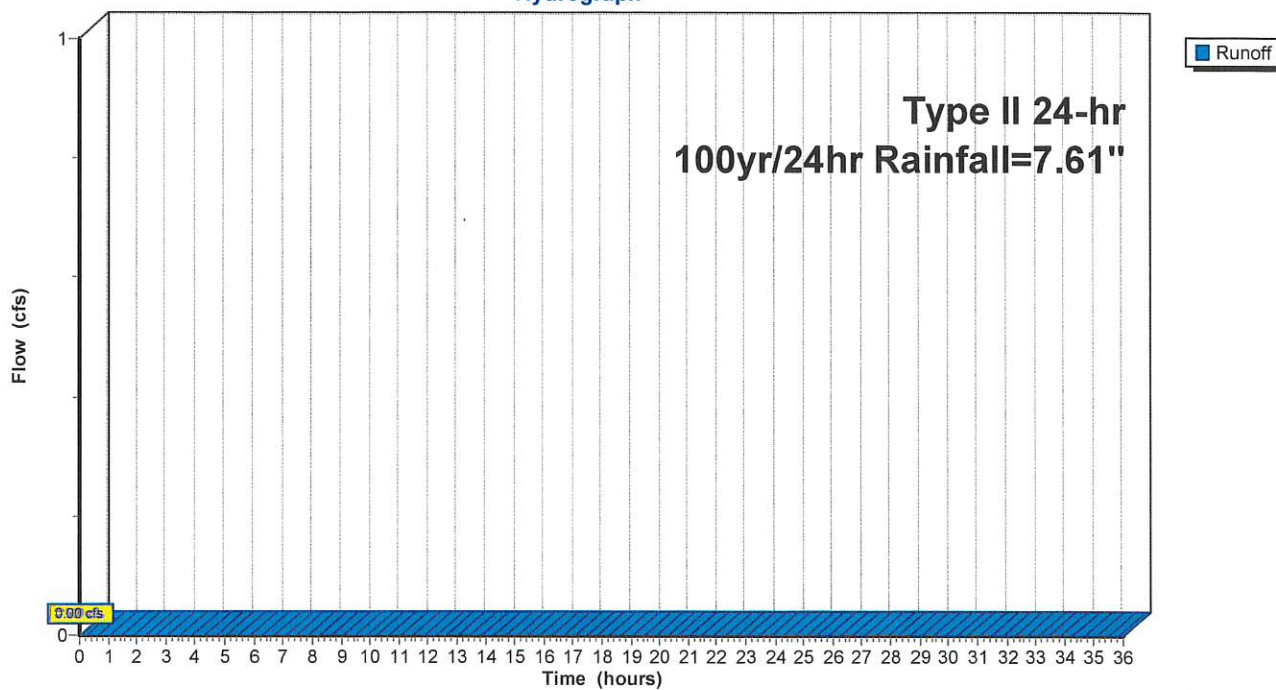
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 65

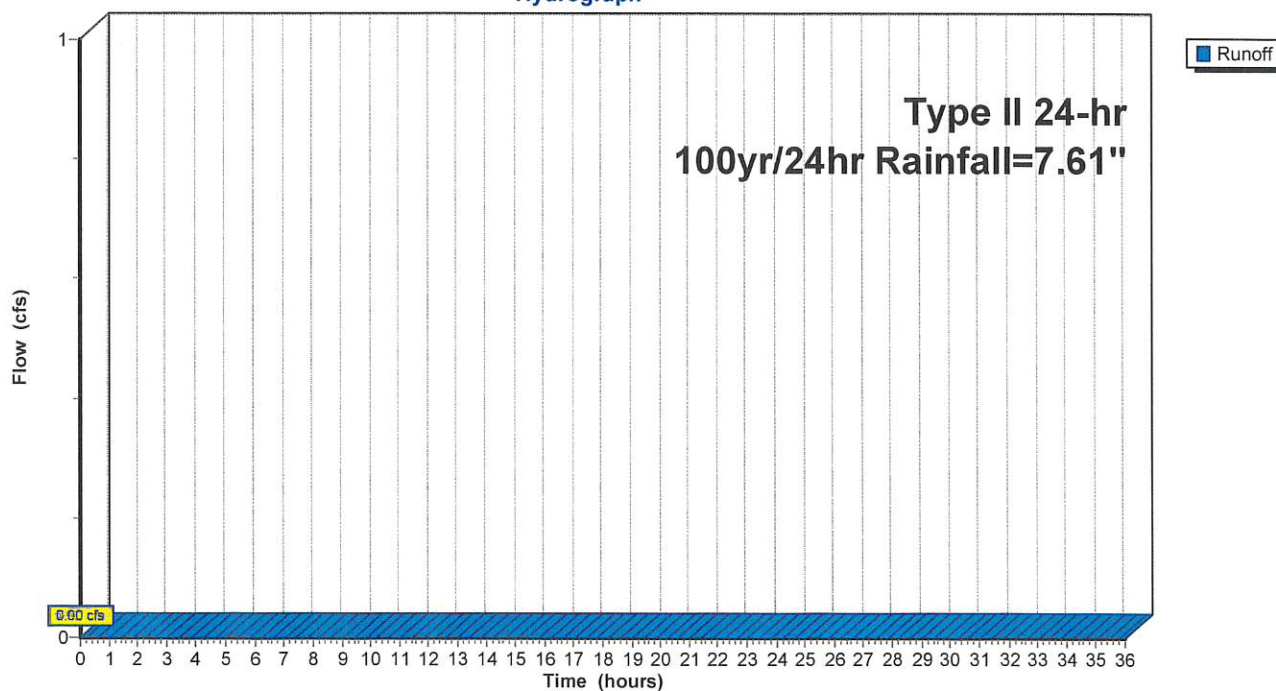
Subcatchment 5aS: To CB5

Hydrograph



Subcatchment 5bS: To CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

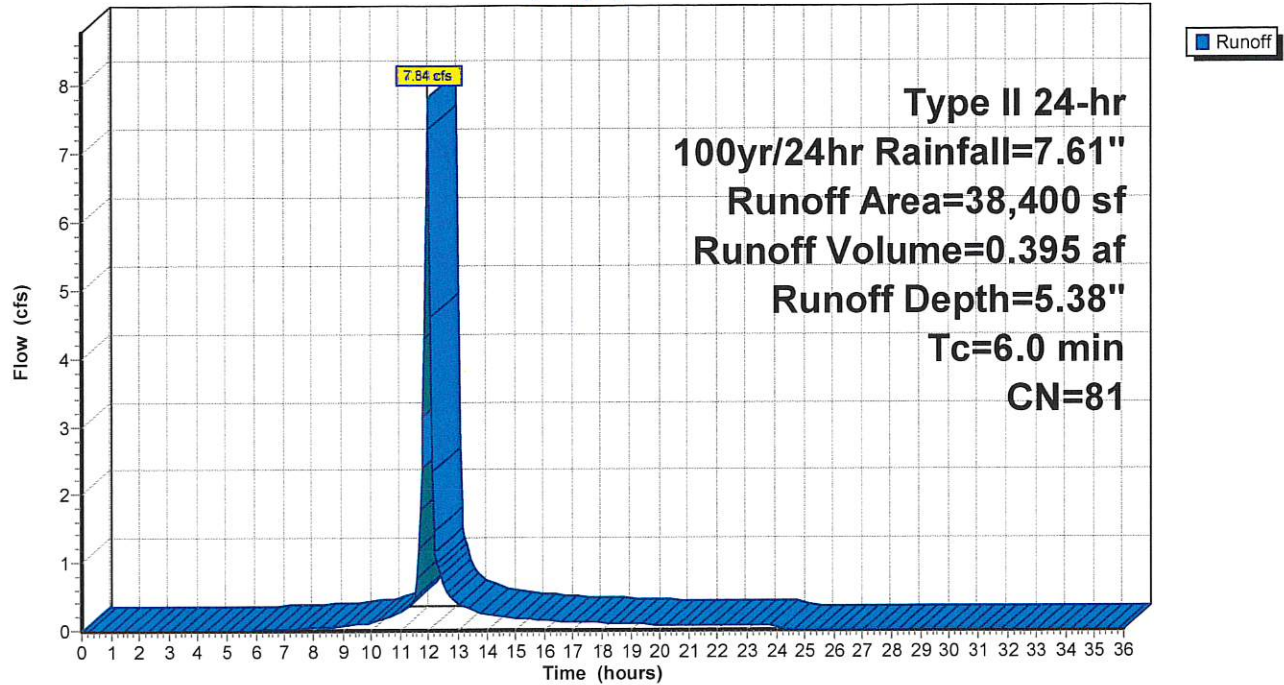
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 66

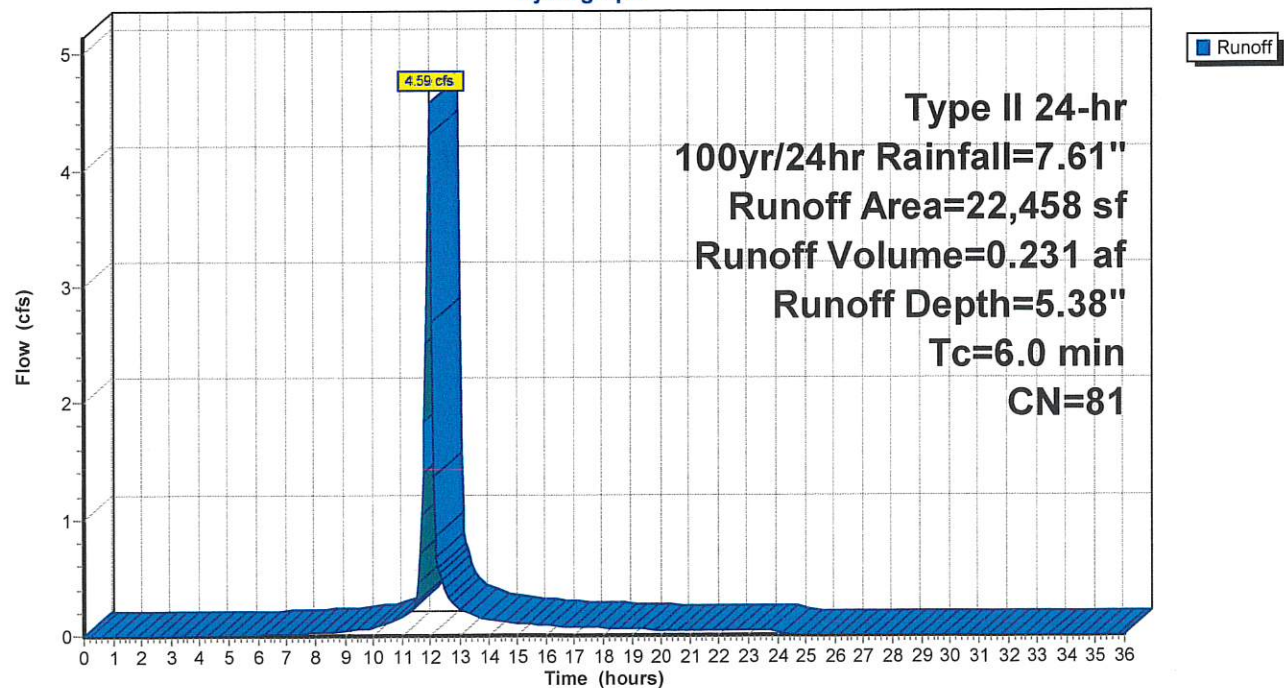
Subcatchment 5S: To CB5

Hydrograph



Subcatchment 6S: To CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

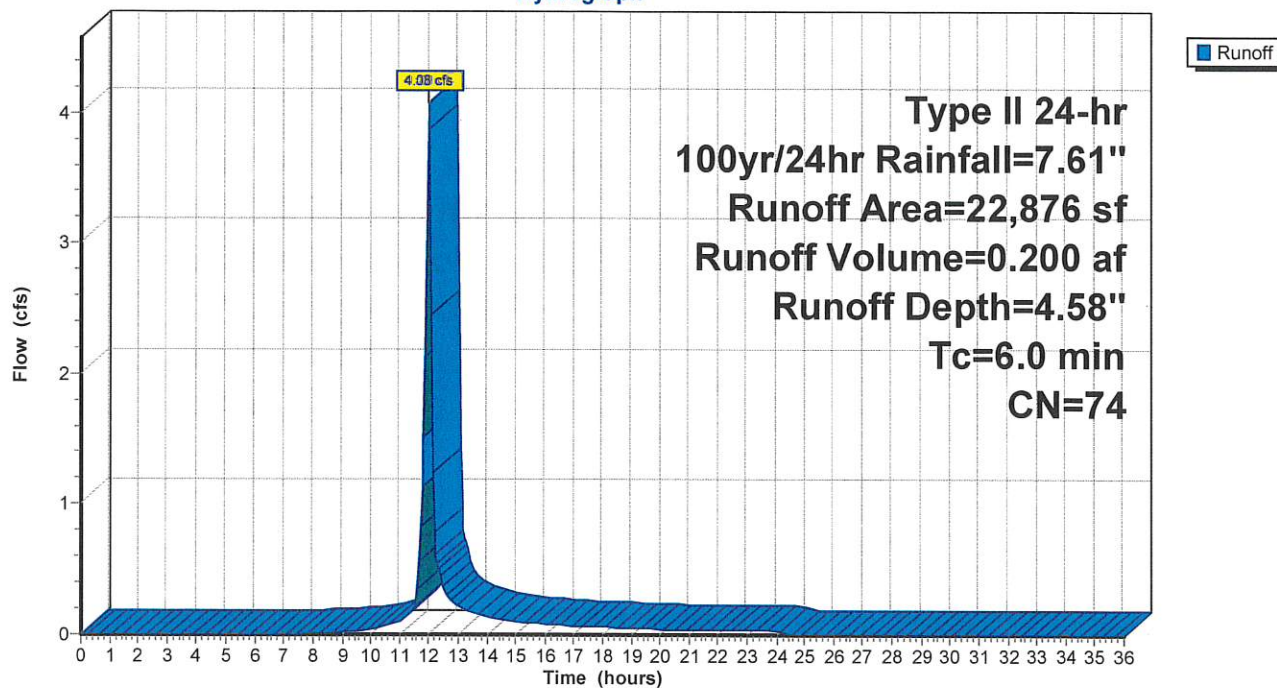
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 67

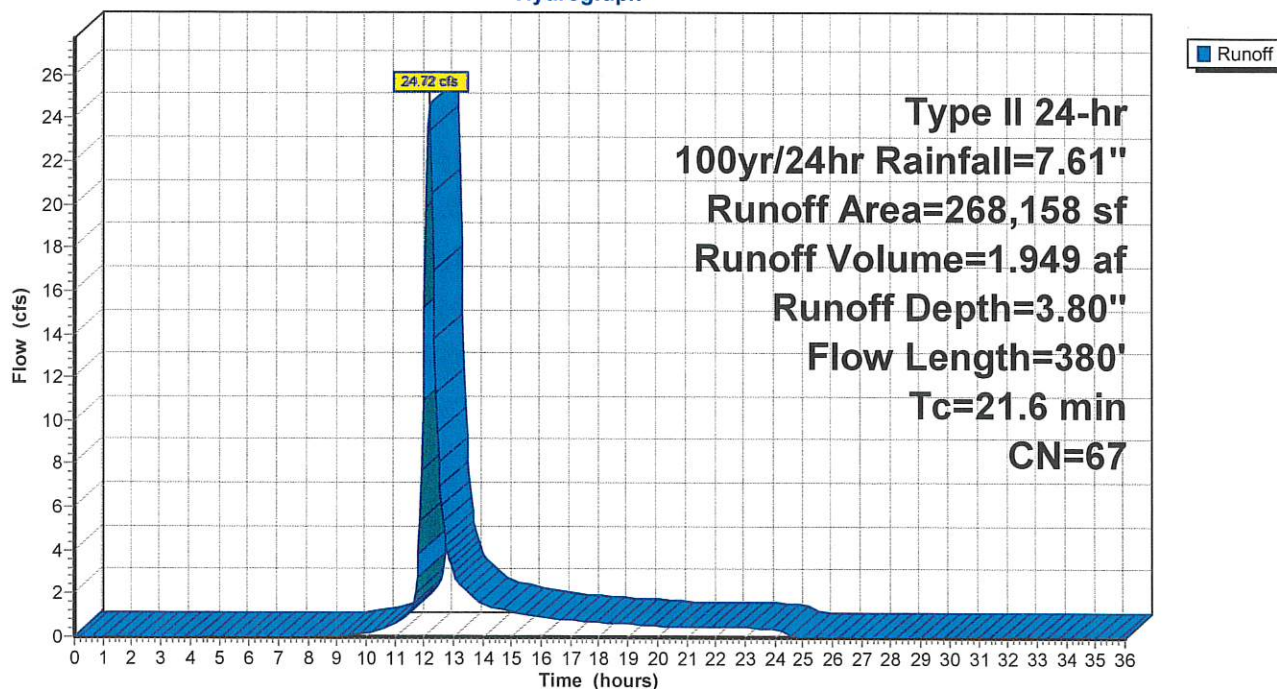
Subcatchment 7S: To Basin

Hydrograph



Subcatchment 8S: Bypassing

Hydrograph



Runoff

Prepared by {enter your company name here}

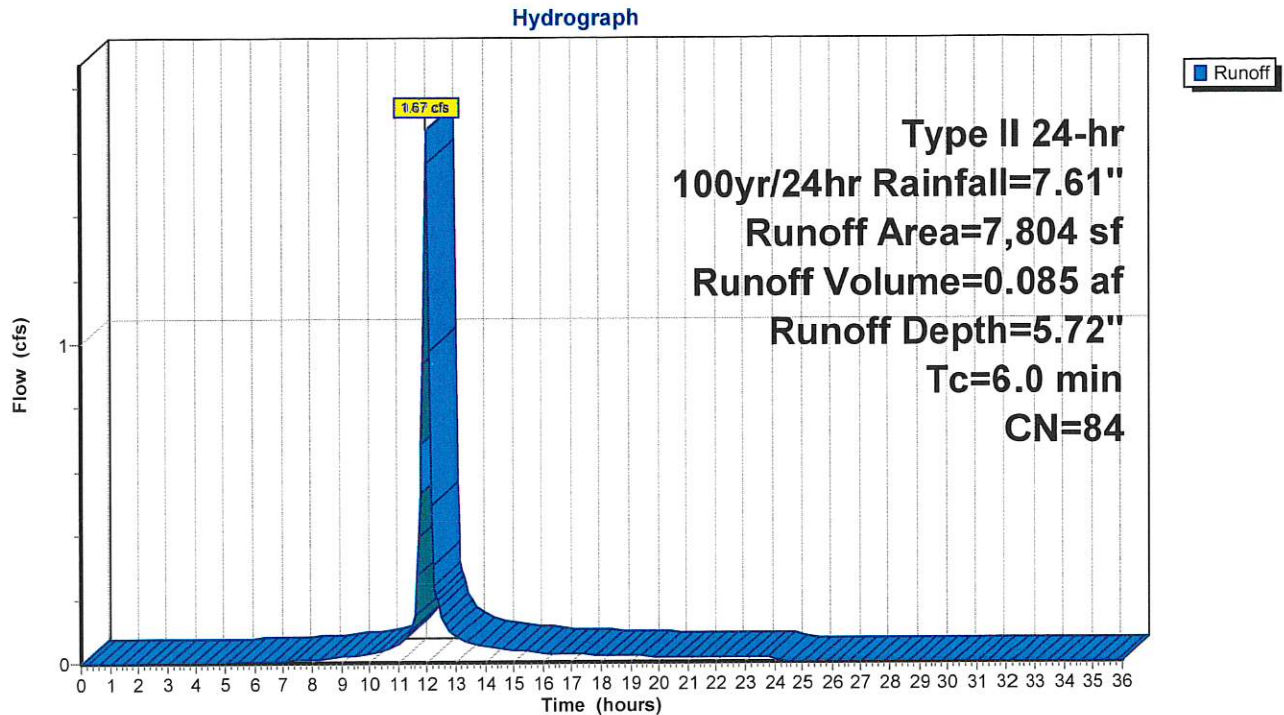
HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

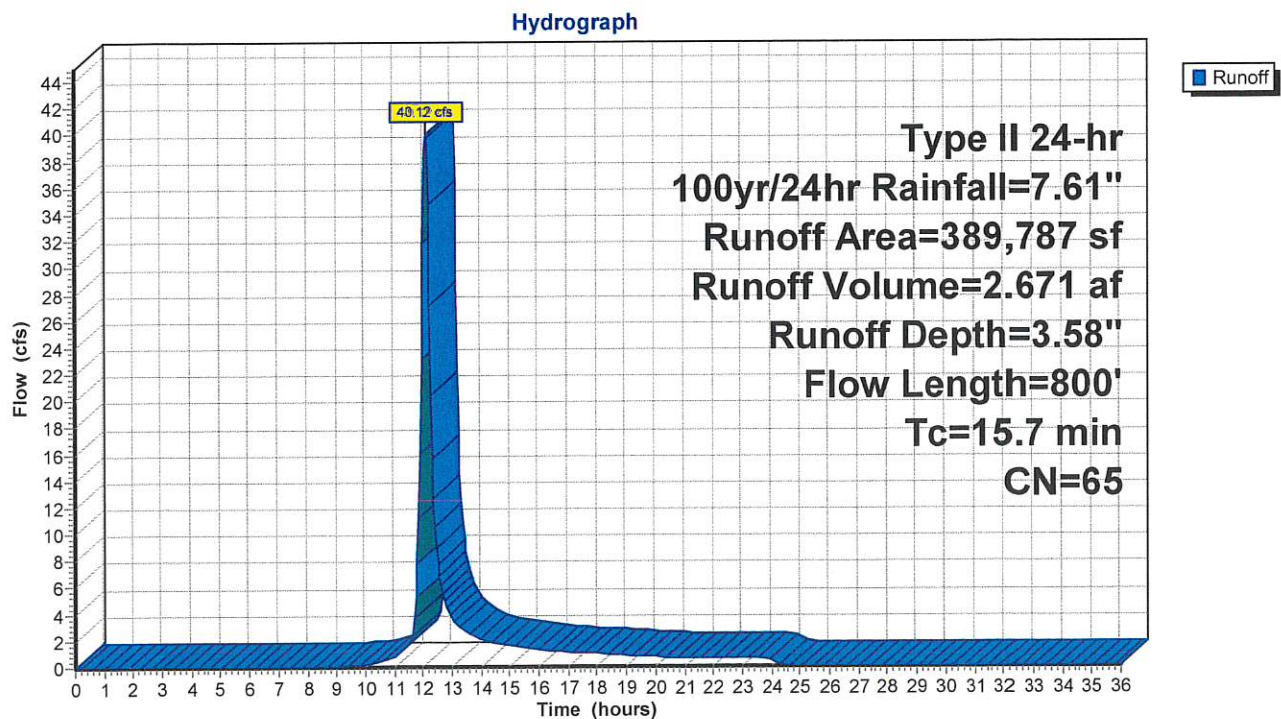
Printed 9/13/2023

Page 68

Subcatchment 9S: To Trench Drain



Subcatchment OS: To Outfall



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

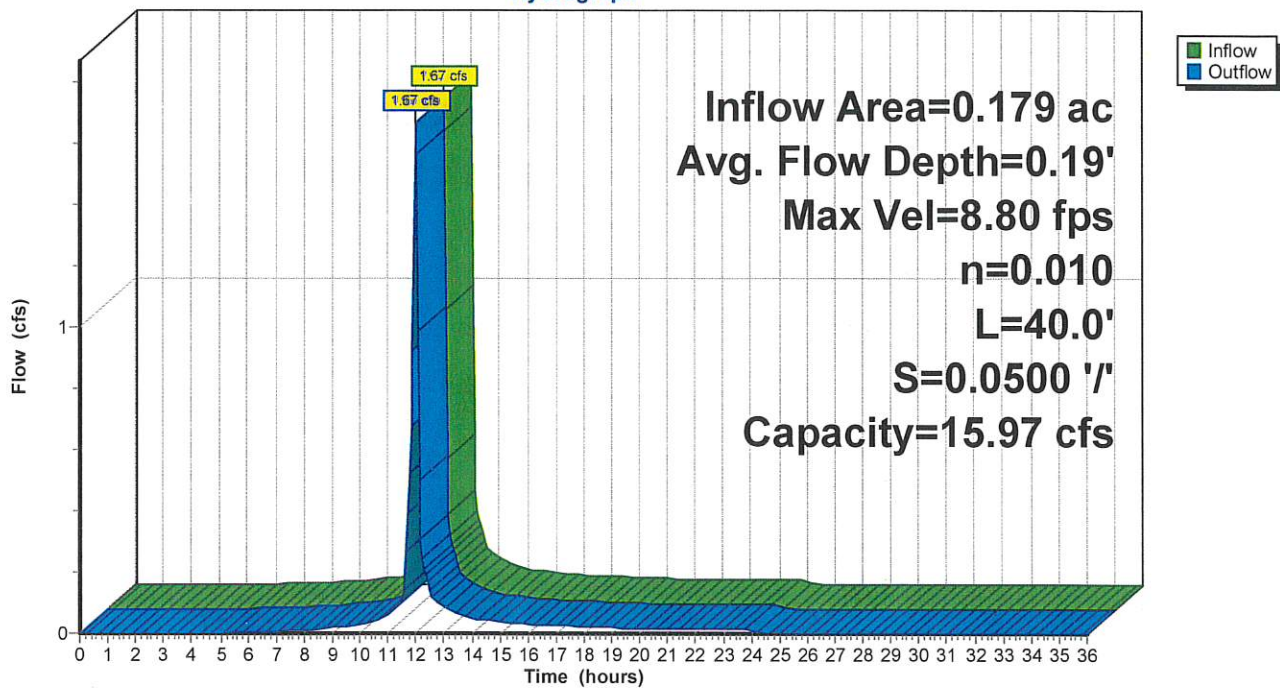
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 69

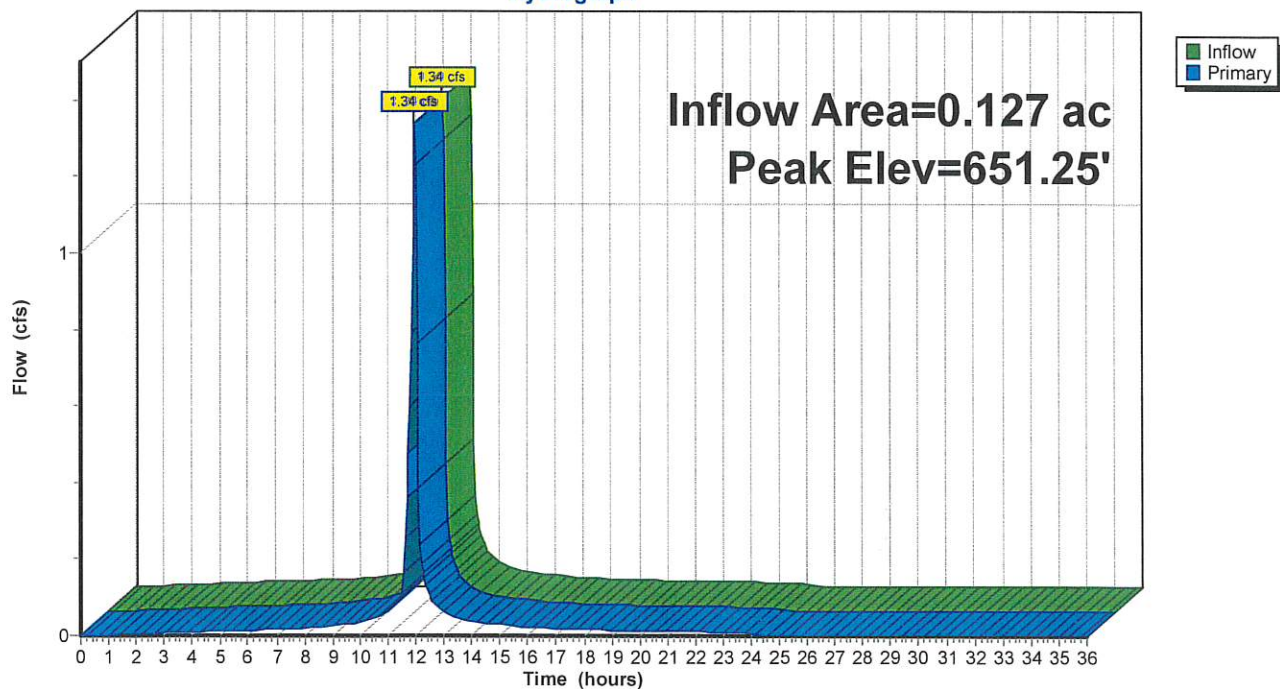
Reach 16R: Trench Drain

Hydrograph



Pond 9P: CB1

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

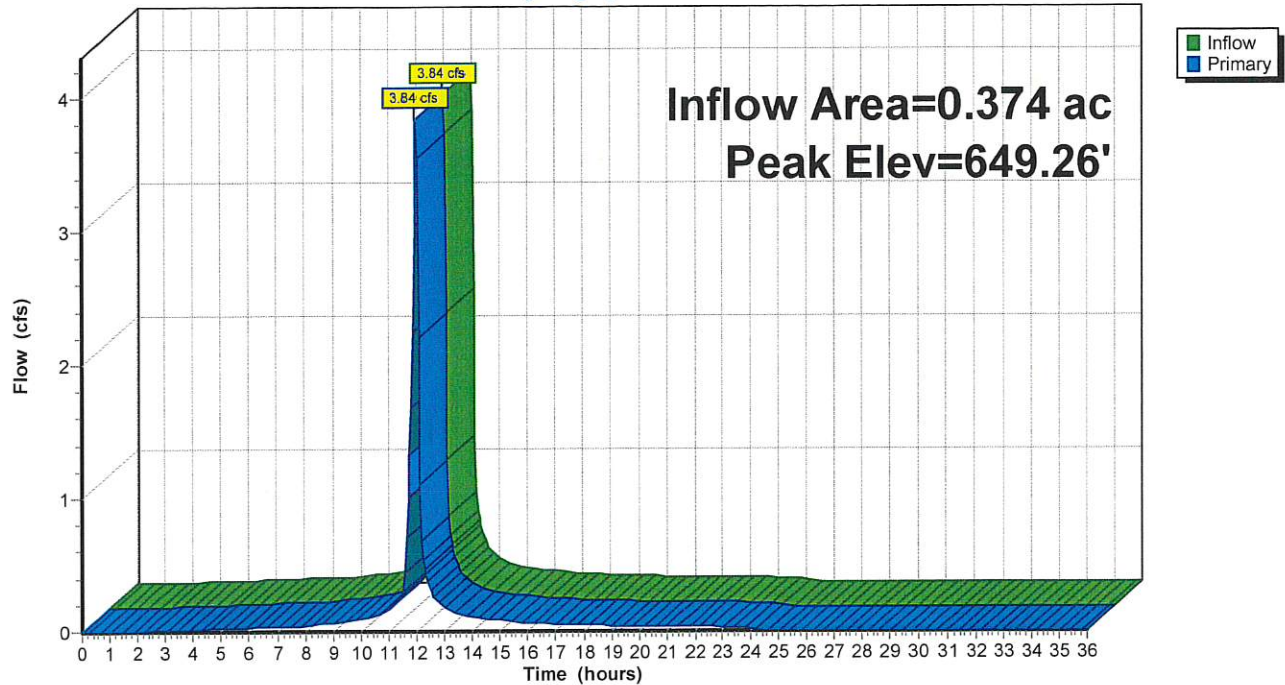
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 70

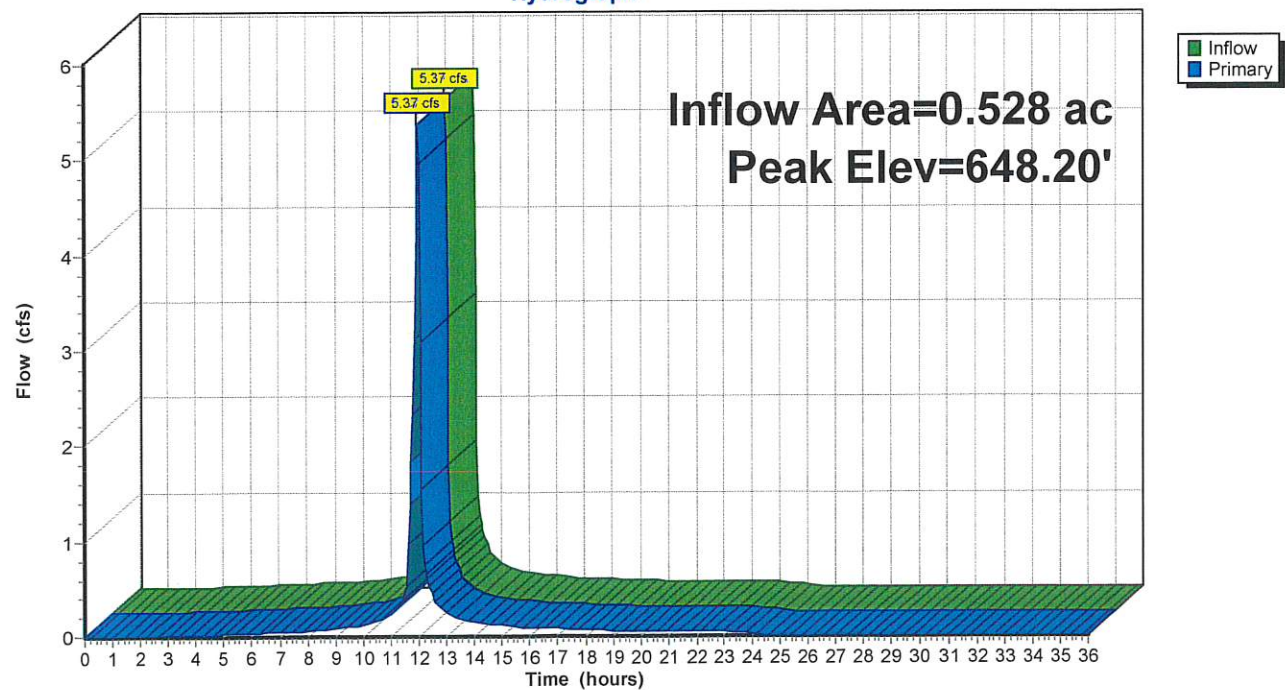
Pond 10P: CB2

Hydrograph



Pond 11P: CB3

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

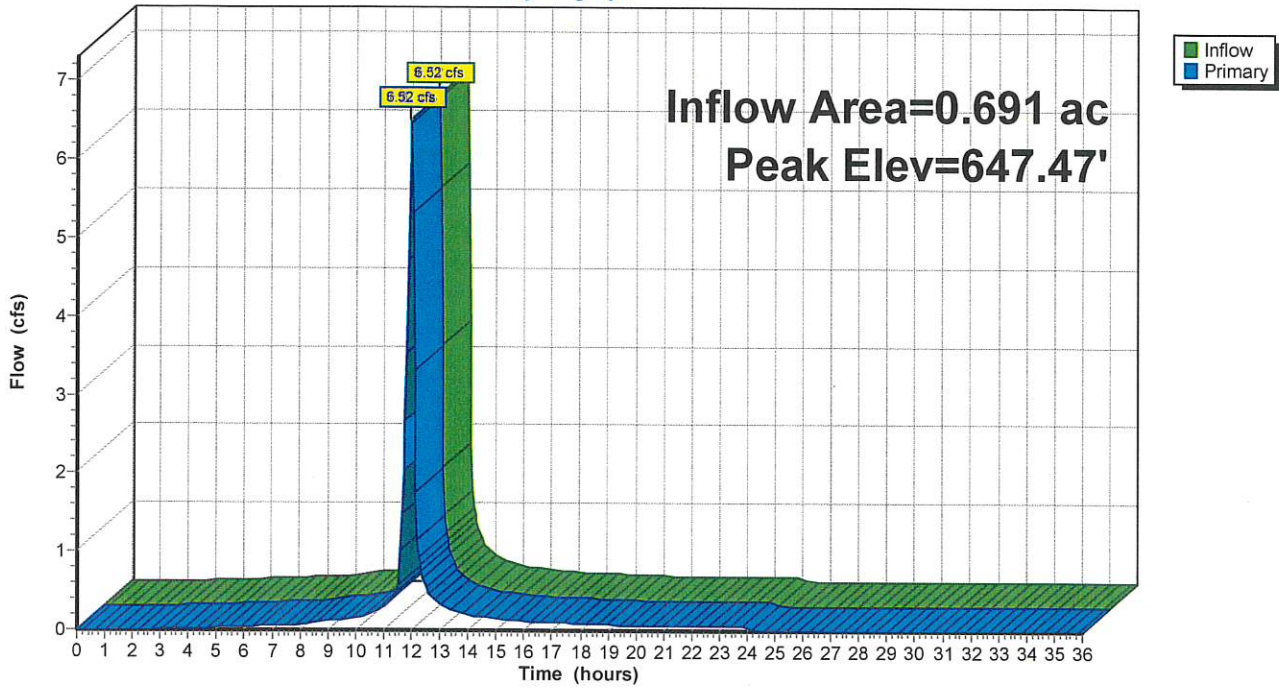
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 71

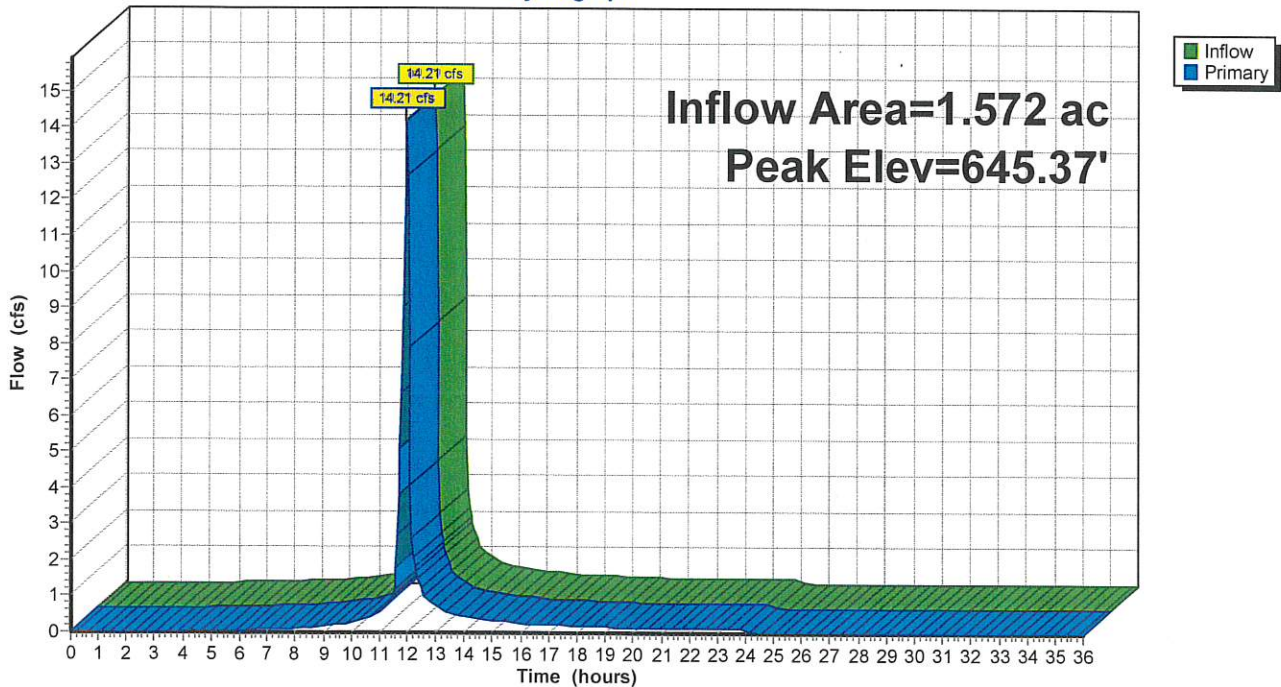
Pond 12P: CB4

Hydrograph



Pond 13aP: CB6

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

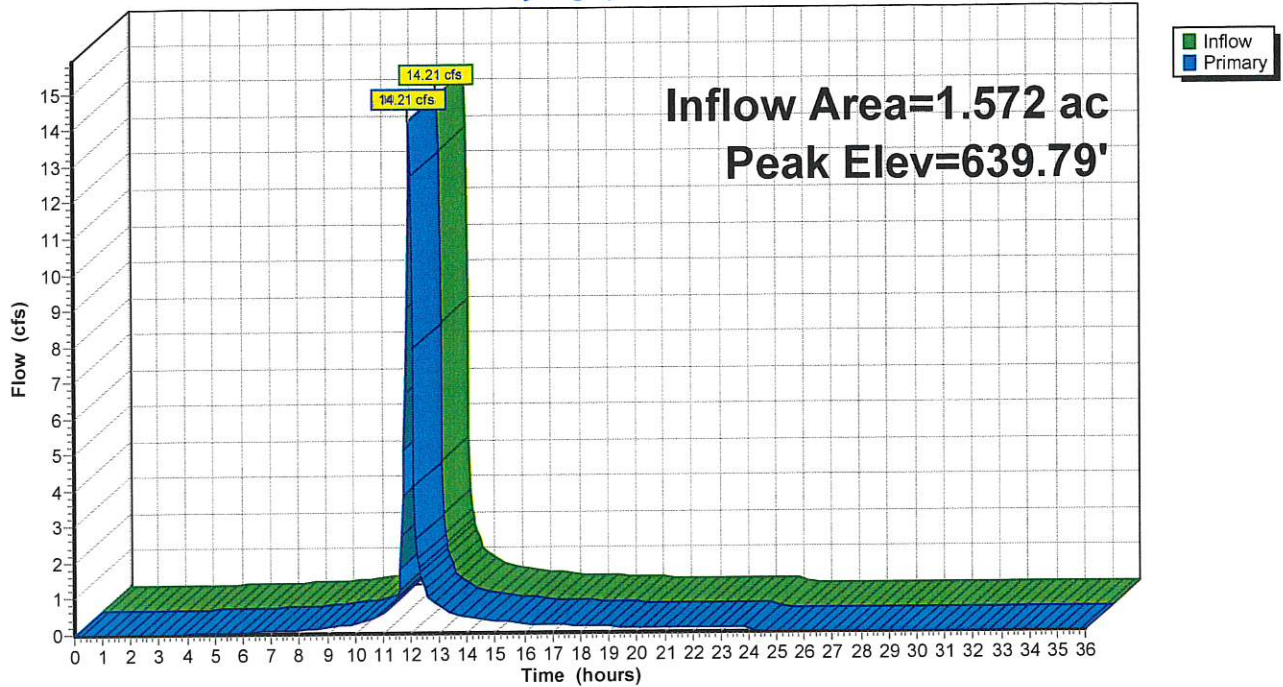
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 72

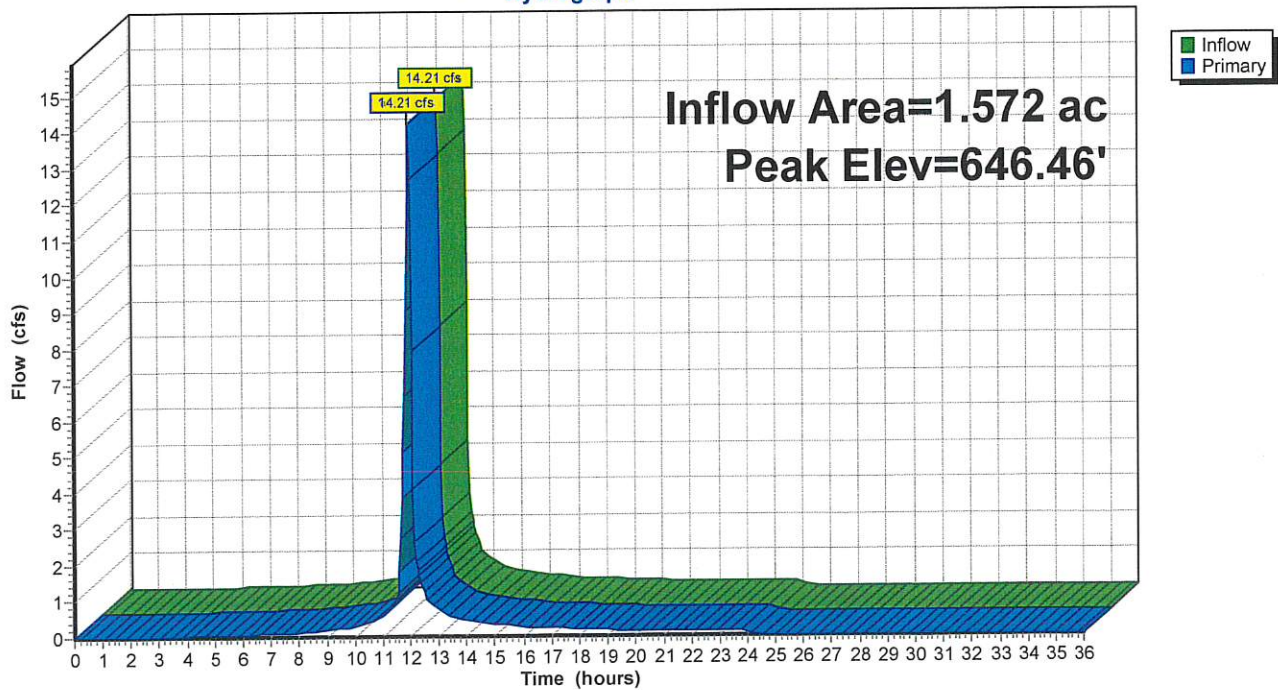
Pond 13bP: CB7

Hydrograph



Pond 13P: CB5

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

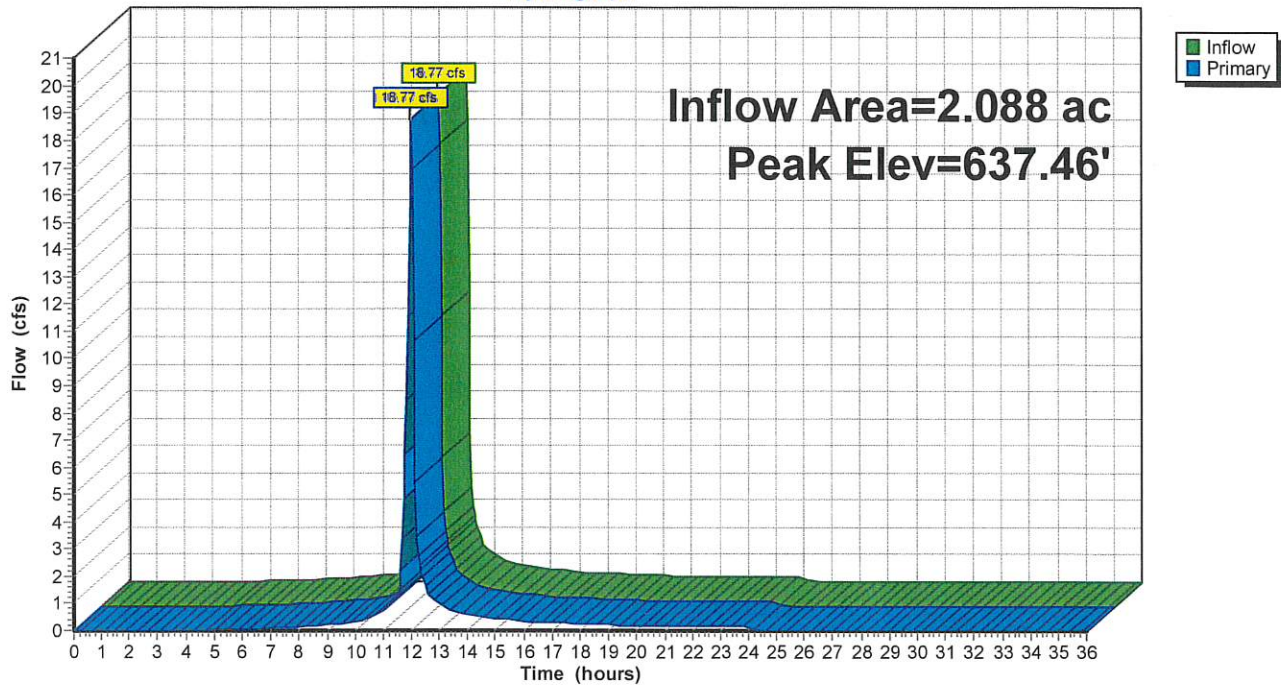
Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 73

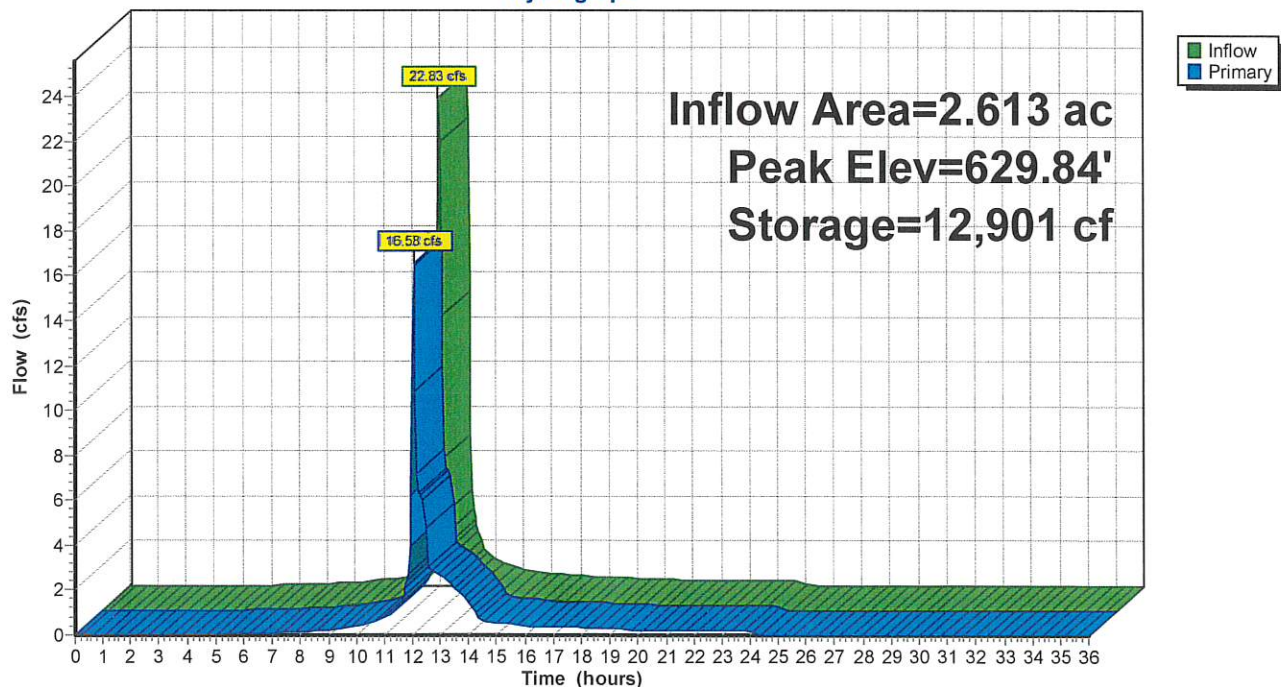
Pond 14P: CB8

Hydrograph



Pond 15P: Detention Basin

Hydrograph



Runoff

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 08801 © 2020 HydroCAD Software Solutions LLC

Brookhollow Senior Apartments
Type II 24-hr 100yr/24hr Rainfall=7.61"

Printed 9/13/2023

Page 74

Link 16L: Site Outfall

Hydrograph

