Attachment 6

Addendum Report to Hydrology and Preliminary LID Report

ESA

ADDENDUM REPORT

to
Alliance Land Planning & Engineering, Inc.
Job No. 1486
May 2017

ONSITE HYDROLOGY
&
PRELIMINARY LID

VTTM 83375
3-STORY MIXED USE BUILDING W/ SUBTERRANEAN PARKING
600 FOOTHILL BLVD
LA CANADA FLINTRIDGE, CA 91011

Prepared for:
600 Foothill Owner, LP
500 Brand Blvd. 20TH FLR.
Glendale, CA 92103

February 8, 2021

Southland Civil Engineering & Survey, LLP
87 North Raymond Avenue, Suite 300
Pasadena, CA 91103
Tel: (626) 486-2555
Fax: (626) 486-2556

Project Number: 7290-20010

INDEX:

LIST OF ATTACHMENTS:

1- PROPOSED SITE HYDROLOGY MAP

2- LID SITE EXHIBIT

3- LA COUNTY HYDROLOGY GIS MAPS

4- HYDROCALC RESULTS:

FIRST FLUSH RUNOFF, EXIST. PEAK RUNOFF, PROP. PEAK RUNOFF

5- PRELIMINARY DRYWELL SIZING CALCULATIONS & DETAILS

6- GEOTECHNICAL REPORT EXCERPTS

7- PREVIOUSLY APPROVED HYDROLOGY REPORT

87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com

A. PROJECT SUMMARY

This report has been prepared as addendum to the previously submitted "Onsite Hydrology Report" (by Alliance Land Planning & Engineering, Inc., Job No. 1486) for the project at 600 Foothill Blvd, La Canada Flintridge as an update per the revised site plan, and in support of Vesting Tentative Tract 83375.

The development project includes one (1) proposed multi-story, mixed use building with a total of forty (47) units of Senior Housing and twelve (12) Hotel Units over one (1) subterranean parking level. The project site is a 1.3-acre lot within the City of La Cañada Flintridge, CA. and is currently developed with a church and parking lot, to be demolished and redeveloped.

B. DEVELOPED CONDITION

A site map, showing the proposed development with relevant area quantities and information can be found in Attachment 1. Site location hydrology maps exhibit showing relevant hydrology design parameters can be found in Attachment 2.

The previously Onsite Hydrology Report (Attachment 7) was prepared for a Senior Living Center of similar land use. The existing condition is not re-analyzed in this addendum. The developed condition is re-analyzed because of the new site plan and similarly concludes "no impacts have been calculated to result from the proposed Oakmont site design."

CONDITION	BASIN	AREA	FREQUENCY	FLOWRATE	VOLUME
		ac	yr	cfs	ac-ft
EXISTING	A	1.29	25	4.83	0.59
DEVELOPED	A	1.29	25	4.80	0.57
Δ	A	0.00	25	-0.03	-0.02

87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com

C. LOW IMPACT DEVELOPMENT (LID) SUMMARY

The project has been identified as a “Designated Project” per Section 2.1 of the 2014 Los Angeles County Low Impact Development (LID) Manual, due to the development project equaling to one acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area.

The project proposes to provide stormwater quality treatment by means of an on-site infiltration Drywell System as a mitigation measure per the Regional Water Quality Control Board Order No. R4-2012-0175 (MS4 Permit).

Design and feasibility screening shall be per methods outlined in the 2014 Los Angeles County LID Manual.

Preliminary sizing calculations and details for the Drywell System are provided in Attachment 5.

Preliminary feasibility for on-site infiltration is supported by findings stated in the Supplemental Geotechnical Report for Stormwater Infiltration (R.T. Frankian & Associates Report Number #2017-005-001, provided in Attachment 6).

Per the report, “it is recommended that infiltration at the site only be within the alluvial soils” and the recommended design infiltration rate for sizing is 0.52 in/hr.

A new soils percolation test to support the proposed design of the Drywell System shall be required for final engineering.

A summary of the preliminary proposed stormwater quality measures to be implemented for the project is as follows:

- One (1) 36” pre-treatment catch basin
- Infiltration Drywell with Storage - proposed to retain and infiltrate the required Stormwater Quality Design Volume (SWQDv) below the point of overflow discharge. The SWQDv was calculated using the LA County HydroCalc program based on a ‘first flush’ 85th Percentile rainfall of 1.17-inches. The HydroCalc result is provided in Attachment 4. The infiltration facility shall be a below-grade drywell with storage. Preliminary drywell sizing and drawdown calculations can be found in Attachment 5.

87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com

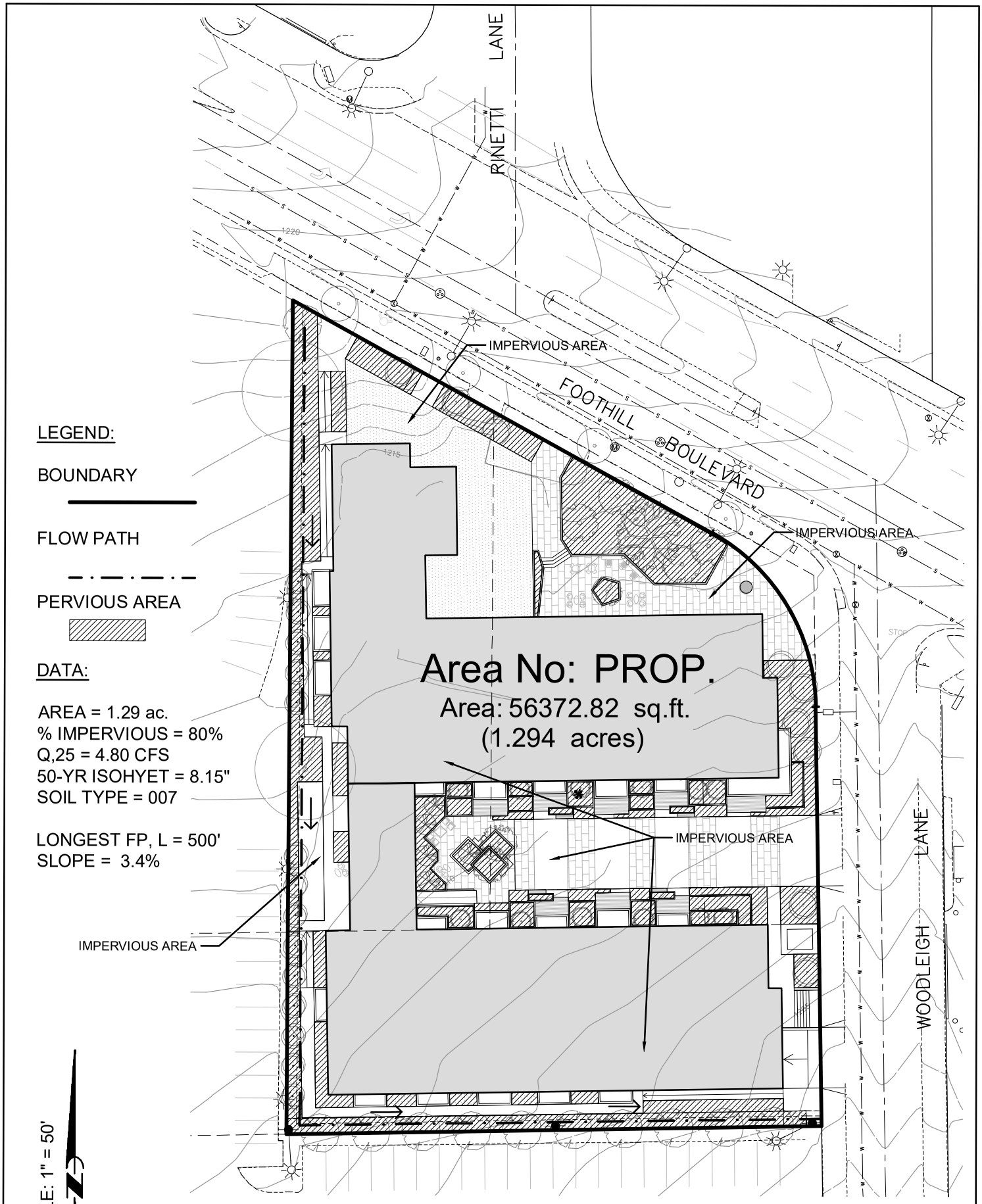
Upon time for final permitting, it is expected that the property owner shall uphold any agreements and/or covenants to maintain, inspect, and repair all BMP's as required by the County of Los Angeles.

D. REFERENCES

Onsite Hydrology Report, Alliance Land Planning & Engineering, Inc., Job No. 1486, May 2017

Report of Geotechnical Investigation…, RTF&A Geotechnical Engineering & Engineering Geology, Job No. 2017-005-001, April 21, 2017

87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com



LEGEND:

BOUNDARY

FLOW PATH

PERVIOUS AREA

DATA:

AREA = 1.29 ac.
% IMPERVIOUS = 80%
Q,25 = 4.80 CFS
50-YR ISOHYET = 8.15"
SOIL TYPE = 007

LONGEST FP, L = 500'
SLOPE = 3.4%

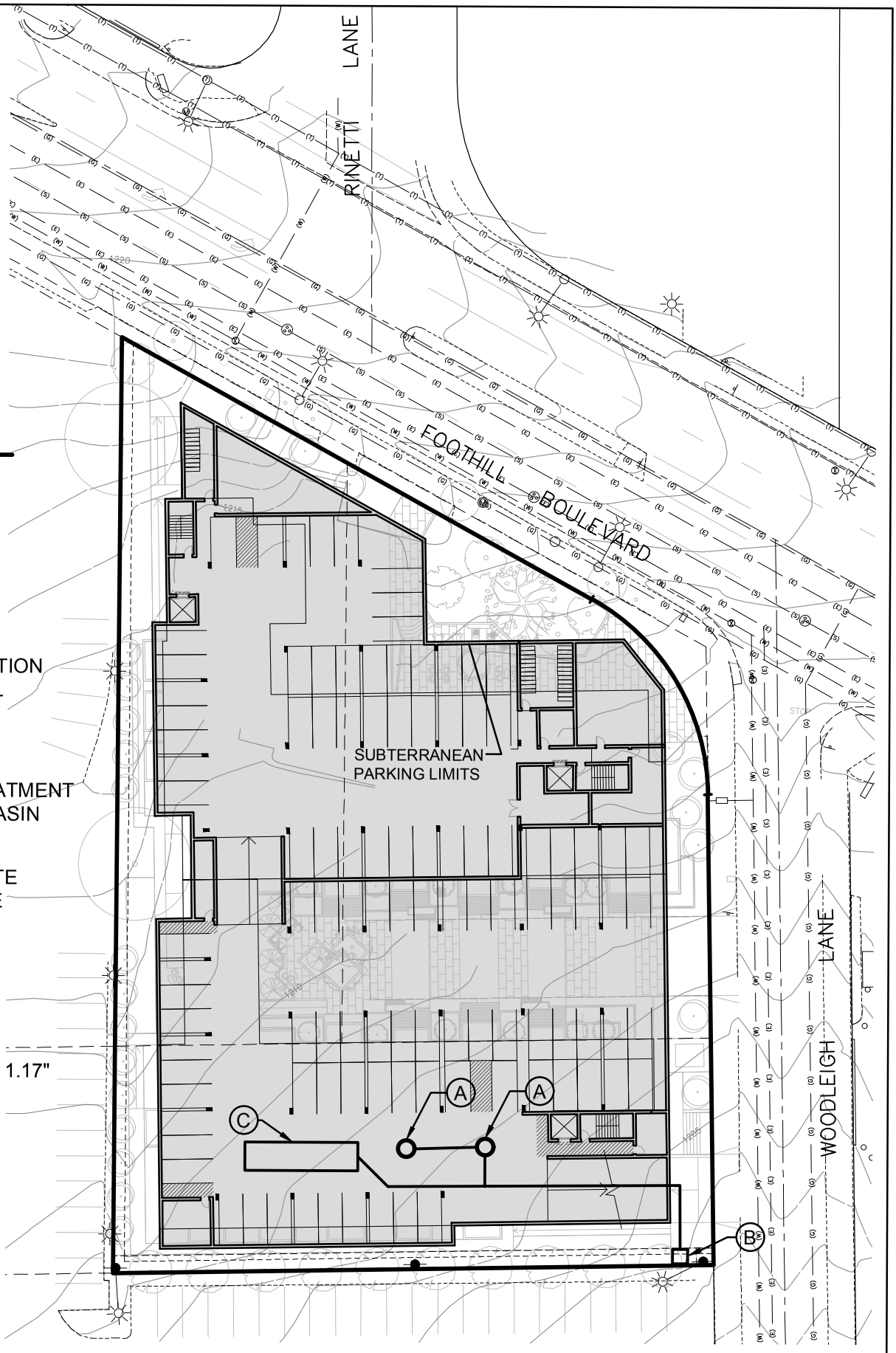
SCALE: 1" = 50'

PROPOSED SITE HYDROLOGY MAP

600 FOOTHILL BLVD

PREPARED BY:
Southland
Civil Engineering & Survey, LLP
87 N. Raymond Ave., Ste 300
Pasadena, CA 91103
Office: 626-486-2555
Fax: 626-486-2556
Proj. No. 7290-20010

J:\7290-20010\DRAINAGE\HYD-PROP.dwg Feb 01, 2021 11:20 am EWANG



LEGEND:

BOUNDARY

(A) INFILTRATION DRYWELL SYSTEM

(B) 36" PRE-TREATMENT CATCH BASIN

(C) 2,958 CF CONCRETE STORAGE

DATA:

85-YR ISOHYET = 1.17"
SOIL TYPE = 007

SCALE: 1" = 50'

SITE LID EXHIBIT

600 FOOTHILL BOULEVARD

PREPARED BY:

Southland Civil Engineering & Survey, LLP

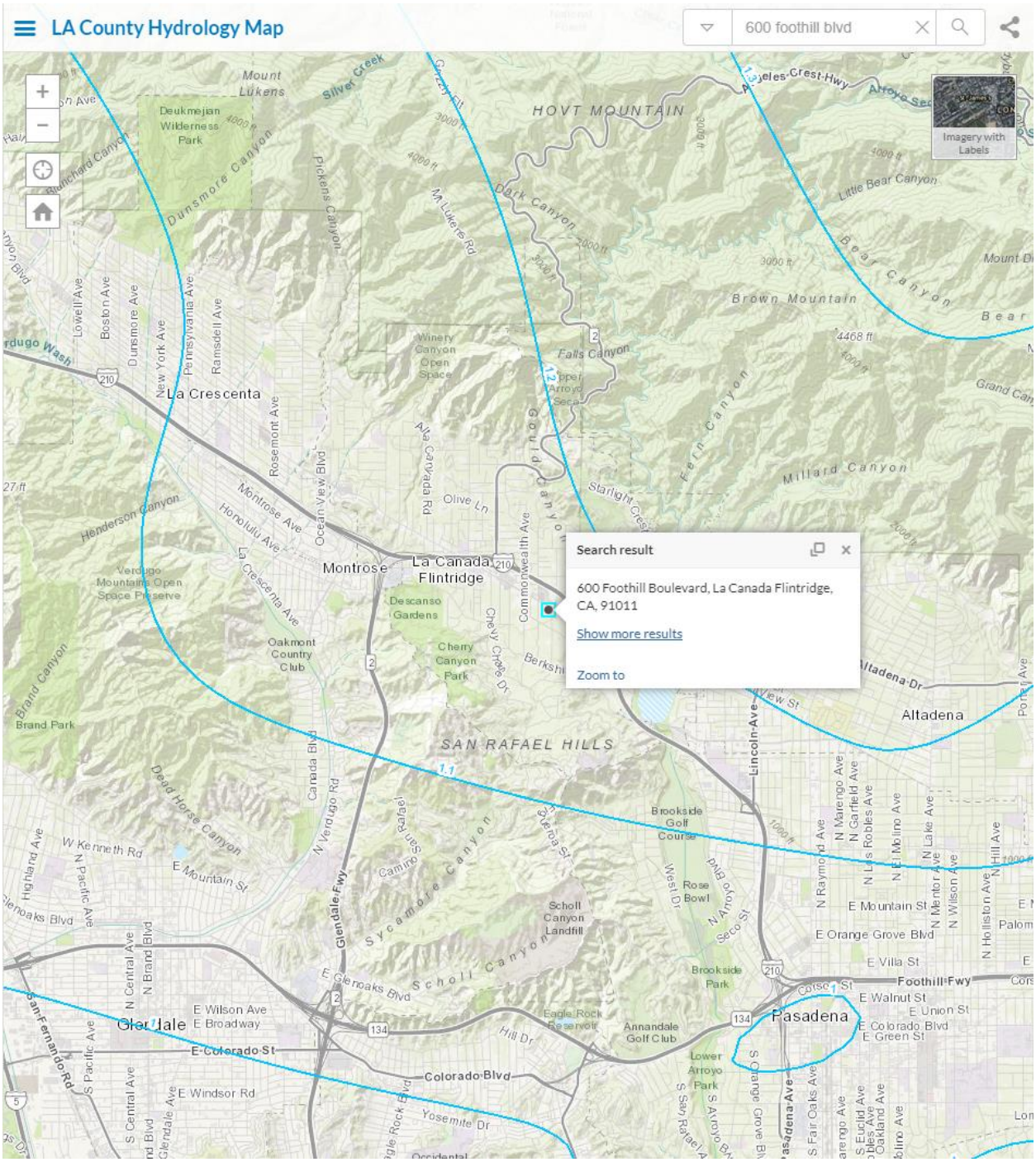
87 N. Raymond Ave., Ste 300
Pasadena, CA 91103
Office: 626-486-2555
Fax: 626-486-2556
Proj. No. 7290-20010

J:\7290-20010\DRAINAGE\LID EXHIBIT.dwg Feb 08, 2021 12:21 pm HGRAY

SOUTHLAND CIVIL ENGINEERING & SURVEY, LLP

ENGINEERING DONE RIGHT … FROM THE START

ATTACHMENT 3 (1/2)

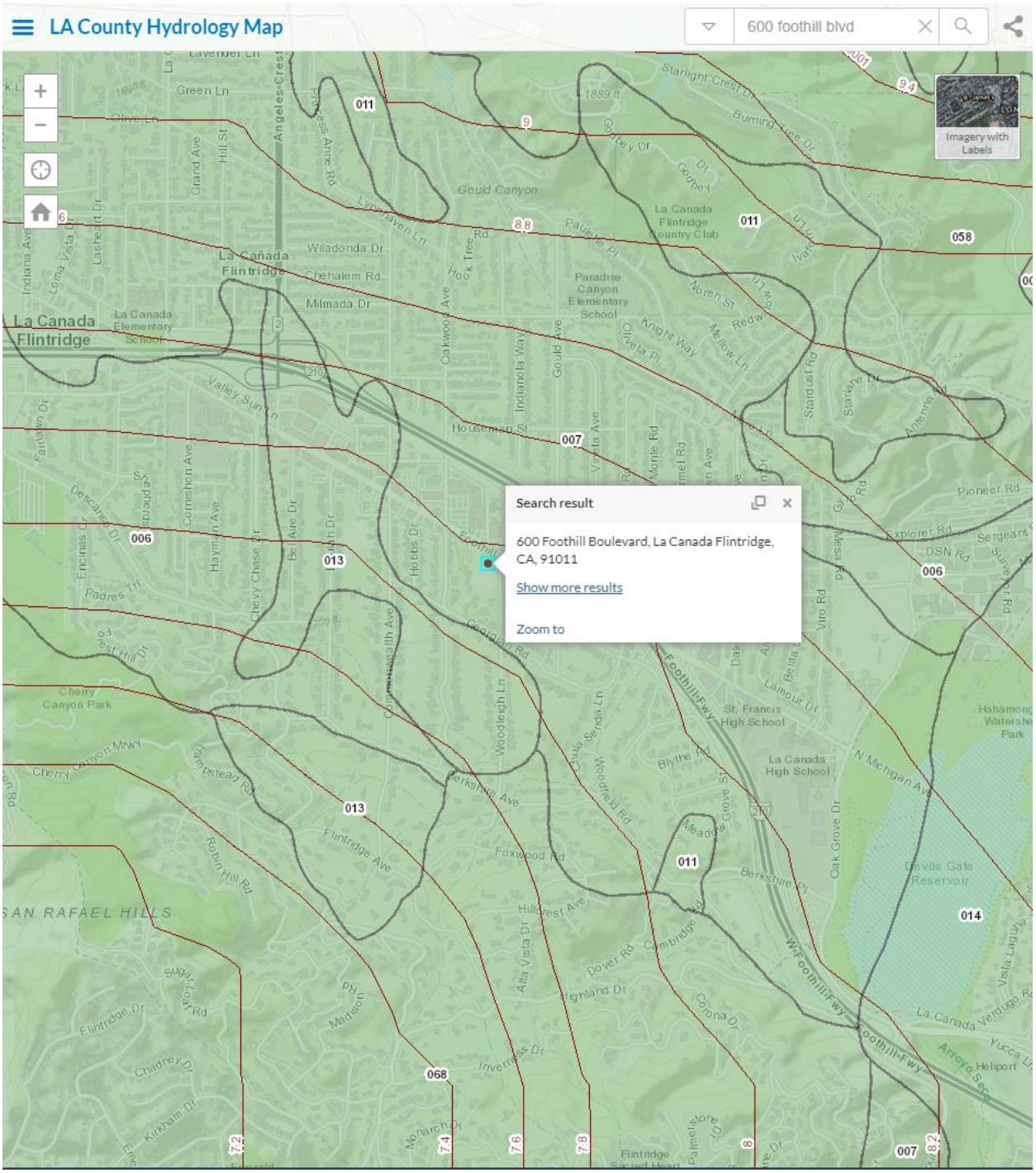


87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com

SOUTHLAND CIVIL ENGINEERING & SURVEY, LLP

ENGINEERING DONE RIGHT … FROM THE START

ATTACHMENT 3 (2/2)



87 N. Raymond Ave, Suite 300, Pasadena, California 91103 / o: 626•486•2555
Email: info@SouthlandCivil.com • www.SouthlandCivil.com

Peak Flow Hydrologic Analysis

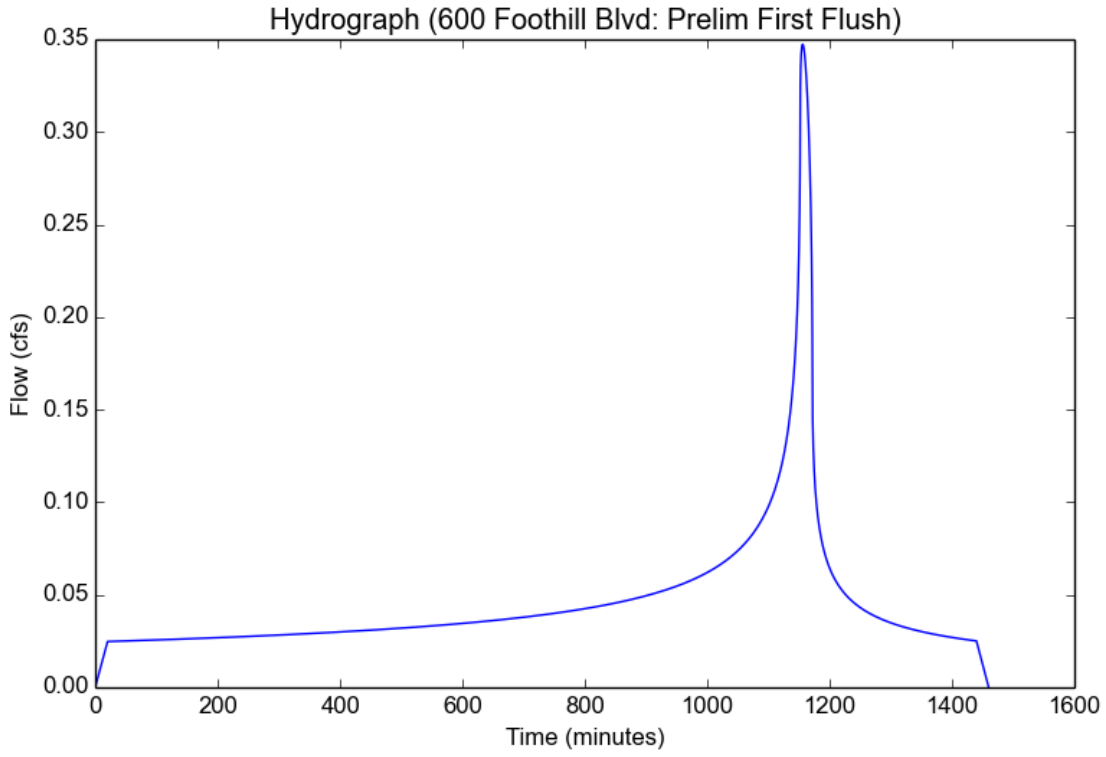
File location: C:/Users/hgray/Desktop/Foothill Report/600 Foothill Blvd - Prelim First Flush.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	600 Foothill Blvd
Subarea ID	Prelim First Flush
Area (ac)	1.29
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.03
85th Percentile Rainfall Depth (in)	1.17
Percent Impervious	0.8
Soil Type	7
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.17
Peak Intensity (in/hr)	0.3638
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.74
Time of Concentration (min)	20.0
Clear Peak Flow Rate (cfs)	0.3473
Burned Peak Flow Rate (cfs)	0.3473
24-Hr Clear Runoff Volume (ac-ft)	0.0923
24-Hr Clear Runoff Volume (cu-ft)	4020.7956



Peak Flow Hydrologic Analysis

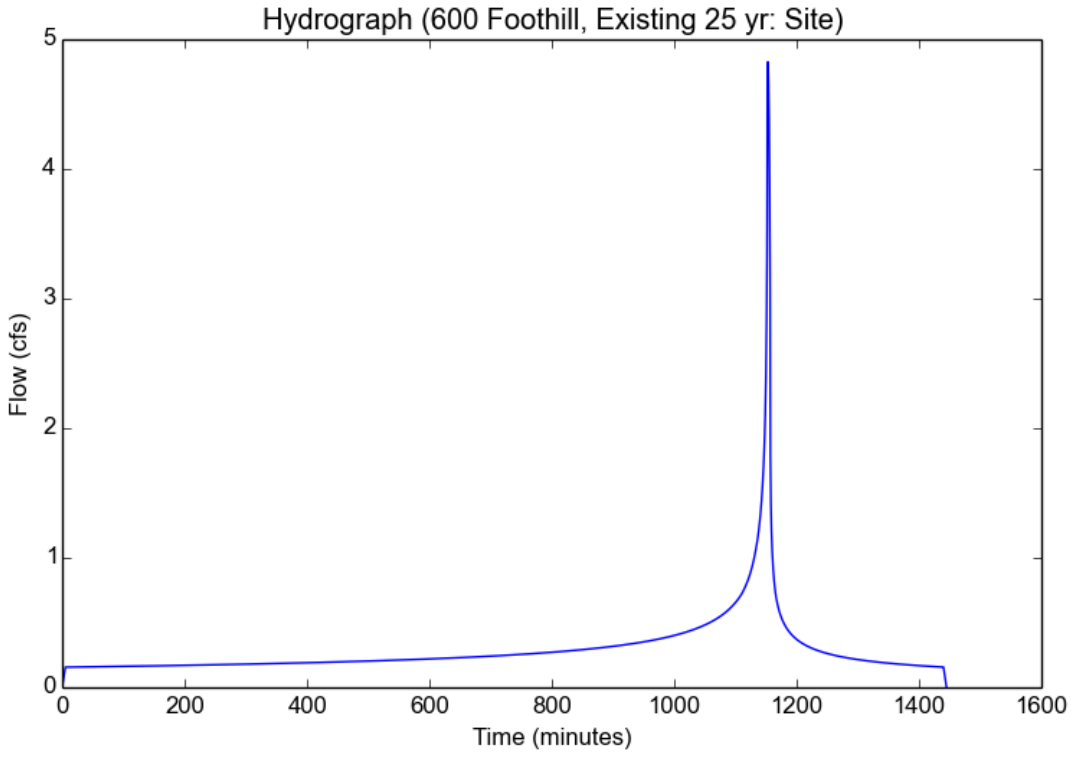
File location: P:/729020010/DRAINAGE/600 Foothill, Existing 25 yr - Site.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	600 Foothill, Existing 25 yr
Subarea ID	Site
Area (ac)	1.29
Flow Path Length (ft)	430.0
Flow Path Slope (vft/hft)	0.0375
50-yr Rainfall Depth (in)	8.15
Percent Impervious	0.83
Soil Type	7
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	7.1557
Peak Intensity (in/hr)	4.2693
Undeveloped Runoff Coefficient (Cu)	0.7609
Developed Runoff Coefficient (Cd)	0.8764
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	4.8264
Burned Peak Flow Rate (cfs)	4.8264
24-Hr Clear Runoff Volume (ac-ft)	0.5905
24-Hr Clear Runoff Volume (cu-ft)	25720.7715



Peak Flow Hydrologic Analysis

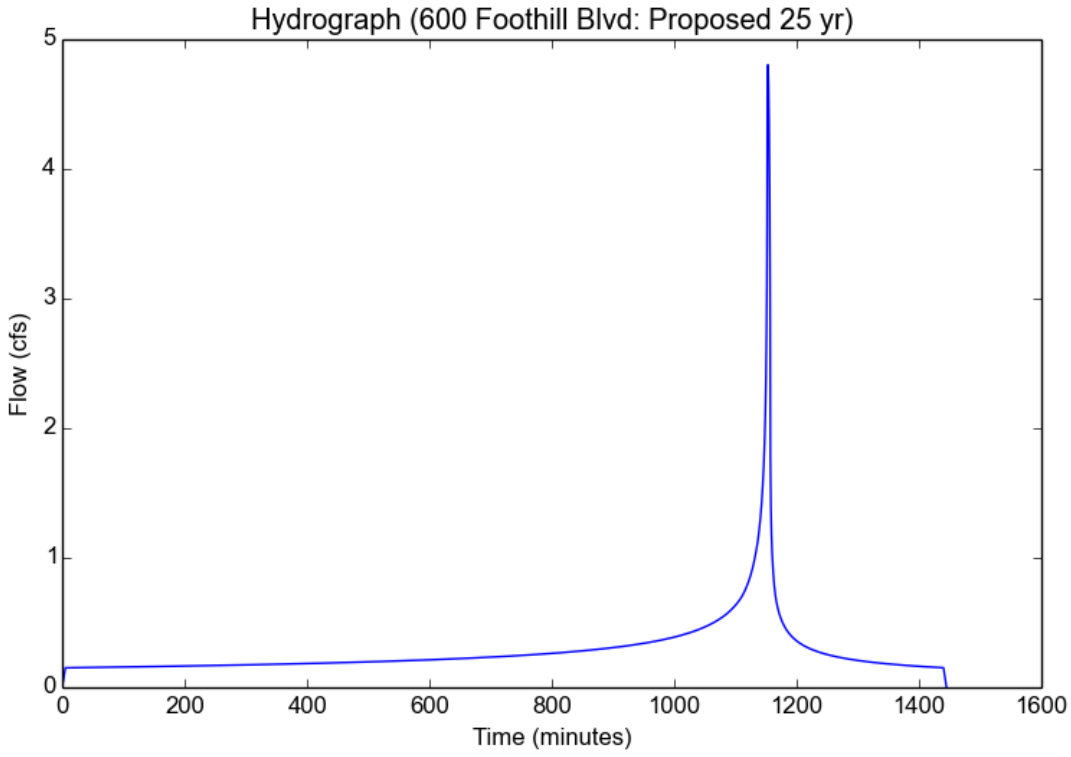
File location: C:/Users/hgray/Desktop/Foothill Report/600 Foothill Blvd - Proposed 25 yr.pdf
Version: HydroCalc 1.0.3

Input Parameters

Project Name	600 Foothill Blvd
Subarea ID	Proposed 25 yr
Area (ac)	1.29
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.03
50-yr Rainfall Depth (in)	8.15
Percent Impervious	0.8
Soil Type	7
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	7.1557
Peak Intensity (in/hr)	4.2693
Undeveloped Runoff Coefficient (Cu)	0.7609
Developed Runoff Coefficient (Cd)	0.8722
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	4.8034
Burned Peak Flow Rate (cfs)	4.8034
24-Hr Clear Runoff Volume (ac-ft)	0.5735
24-Hr Clear Runoff Volume (cu-ft)	24981.8535



Maxwell® IV Drainage System Calculations Prepared on January 27, 2021
Project: **600 Foothill Blvd - La Canada, CA**
Contact: Henry Gray at Southland Civil Engineering & Survey - Pasadena, CA

Given:

Measured Infiltration Rate	2.10	in/hr
Safety Factor	4.00	
Design Infiltration Rate	0.53	in/hr
Mitigated Volume	4,052	ft^3
Required Drawdown Time	96	hours
Depth to Emergency Overflow	0	ft
Min. Depth to Infiltration	10	ft
Groundwater Depth for Design	62	ft

Drywell rim at 15' below grade, therefore groundwater is 47' below rim.

Proposed:

Drywell Rock Shaft Diameter	6	ft
Drywell Chamber Depth	15	ft
Rock Porosity	40	%
Depth to Infiltration	11	ft
Drywell Bottom Depth	37	ft

Apply Safety Factor to get Design Rate.

$2.10 \ \frac{in}{hr} \div 4 = 0.53 \ \frac{in}{hr}$

Convert Design Rate from in/hr to ft/sec.

$0.53 \ \frac{in}{hr} \times \frac{1 \ ft}{12 \ in} \times \frac{1 \ hr}{3600 \ sec} = 0.000012 \ \frac{ft}{sec}$

A 6 foot diameter drywell provides 18.85 SF of infiltration area per foot of depth, plus 28.27 SF at the bottom.

For a 37 foot deep drywell, infiltration occurs between 11 feet and 37 feet below grade. This provides 26 feet of infiltration depth in addition to the bottom area. Infiltration area per drywell is calculated below.

$26 \ ft \times 18.85 \frac{ft^2}{ft} + 28.27 \ ft^2 = 518 \ ft^2$

Combine design rate with infiltration area to get flow (disposal) rate for each drywell.

$0.000012 \frac{ft}{sec} \times 518 \ ft^2 = 0.00630 \frac{ft^3}{sec}$

Volume of disposal for each drywell based on various time frames are included below.

96 hrs: 0.0063 CFS x 96 hours x $\frac{3600 \ sec}{1 \ hr}$ = 2,177 cubic feet of retained water disposed of.

Chamber diameter = 4 feet. Drywell rock shaft diameter = 6 feet.
Volume provided in each drywell with chamber depth of 15 feet.

$15 \ ft \times 12.57 \ ft^2 + 22 \ ft \times 28.27 \ ft^2 \times 40 \ \% = 437 \ ft^3$

The MaxWell System is composed of 2 drywell(s) .

Total volume provided = 874 ft^3
Total 96 hour infiltration volume = 4,354 ft^3
Total infiltration flowrate = 0.01260 $\frac{ft^3}{sec}$

Based on the total mitigated volume of 4052 CF, after subtracting the volume infiltrated as quickly as it enters the drywell of 1094 CF, the remaining volume is 2958 CF. The storage provided in the drywell system is 874 CF. Therefore 2084 CF can be stored in a separate detention system.

For any questions, please contact Jason Dupre at 626-250-4724 or via email at JDupre@TorrentResources.com

Torrent Resources (CA) Incorporated
9950 Alder Avenue
Bloomington, CA 92316
Phone 909-829-0740

HydroCalc Summary

Using the hydrograph produced by the HydroCalc Calculator, the area below the drywell flow disposal rate and the hydrograph curve is estimated as the volume infiltrated in the drywell as it enters. 3 different phases will occur during the 85th percentile storm event. Phase 1 will occur during the beginning of the storm event at the initial increase of flow produced by the storm. When the storm flow is equal to the drywell flow disposal rate, phase 1 ends and phase 2 begins. Phase 2 is when the drywell performs at the flow rate it was design at. Any additional runoff that is produced due to the increase of storm flow will require a detention system. The storm will then hit its peak flow and begin to decrease. When the storm flow decreases to an amount equal to the drywell flow disposal rate, phase 2 ends and phase 3 begins. Phase 3 will occur near the end the storm when the drywell infiltrates the residual runoff until the end of the event.

Phase 1 – Initial Filling of Drywell

From time 0 minutes to 6.2 minutes, the 85th storm event flowrate that enters the drywell is less than the drywell steady-state infiltration flowrate (flow disposal rate). Therefore, the entire volume entering the drywell from 0 minutes to 6.2 minutes will infiltrate without overwhelming the drywell. This volume is 2.4 CF.

Time (min)	Incremental Masscurve	Incremental Design Storm Depth (in)	Intensity (in/hr)	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)	Clear Peak Flow Rate (cfs)	Incremental Volume (cu-ft)	Cumulative Volume (cu-ft)	Volume infiltrated by drywell (CF)
6	0.002211043	0.00258692	0	0	0	0.0124584	0.14700931	2.242514897	0.14700931
6.2	0.002284838	0.002673261	0	0	0	0.0128737	0.151992676	2.394507574	0.1512
6.4	0.002358639	0.002759608	0	0	0	0.013289	0.156976043	2.551483617	0.1512

Phase 2 – Drywell Performing at the Design Rate

From time 6.2 minutes to 1445.8 minutes, the flowrate that enters the drywell exceeds the drywell steady-state infiltration flowrate (flow disposal rate). Therefore, the drywell can only infiltrate up to its flow disposal rate which is 0.0126 CFS. Over this period, we multiply the time by the flowrate (and covert as needed) to determine the volume infiltrated in this phase. This volume is 1088.3 CF.

(1445.8-6.2) x 60 SEC/MIN x 0.0126 CFS = 1088.3 CF

Time (min)	Incremental Masscurve	Incremental Design Storm Depth (in)	Intensity (in/hr)	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)	Clear Peak Flow Rate (cfs)	Incremental Volume (cu-ft)	Cumulative Volume (cu-ft)	Volume infiltrated by drywell (CF)
1445.6	1	1.17	0.01385276	0.1	0.74	0.0133264	0.162428603	4049.397196	0.1512
1445.8	1	1.17	0.01341763	0.1	0.74	0.0129078	0.157404683	4049.554601	0.1512
1446	1	1.17	0.01298265	0.1	0.74	0.0124893	0.152382439	4049.706983	0.152382439

Phase 3 – End of the Storm Event

From time 1445.8 to 1452 minute (end of storm event), the 85th storm event flowrate that enters the drywell is less than the drywell steady-state infiltration flowrate (flow disposal rate). Therefore, the entire volume entering the drywell from 1445.8 minutes to 1452 minutes will infiltrate without overwhelming the drywell. This volume is 2.4 CF.

4052 CF - 4049.6 CF = 2.4 CF

Time (min)	Incremental Masscurve	Incremental Design Storm Depth (in)	Intensity (in/hr)	Undeveloped Runoff Coefficient (Cu)	Developed Runoff Coefficient (Cd)	Clear Peak Flow Rate (cfs)	Incremental Volume (cu-ft)	Cumulative Volume (cu-ft)	Volume infiltrated by drywell (CF)
1451.8	1	1.17	0.0004307	0.1	0.74	0.0004143	0.007458732	4051.94887	0.007458732
1452	1	1.17	0	0.1	0.74	0	0.002485973	4051.951356	0.002485973
	0	0	0	0	0	0	0	0	0

The total volume infiltrated as it enters the drywell during the 85th percentile storm event is 2.4 + 1088.3 + 2.4 = 1093 CF (1093 CF)

HydroCalc Volume Analysis

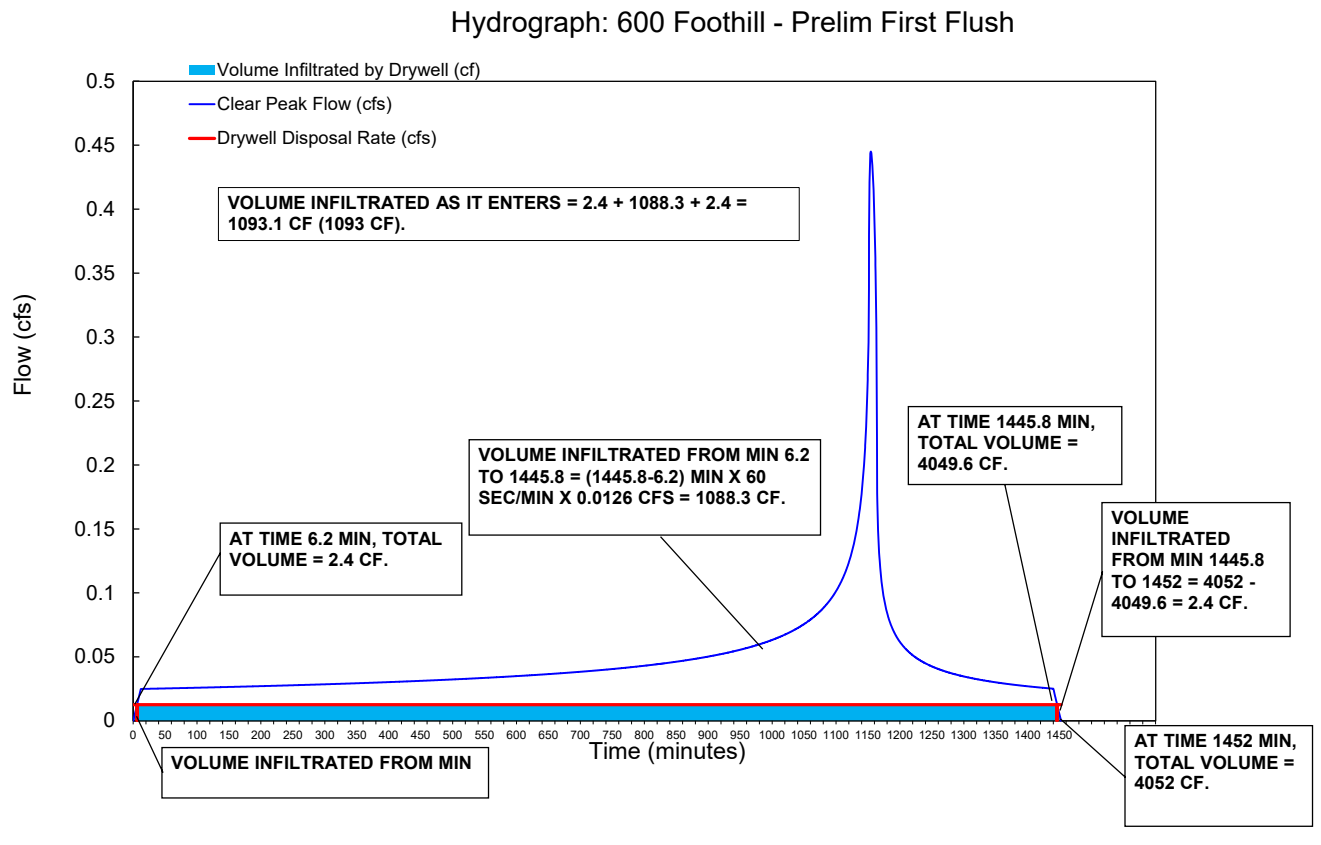
Project: 600 Foothill - Subarea Prelim First Flush ** (Values from project "Peak Flow Hydrologic Analysis")*

HydroCalc Output Results*

Clear Peak Flow (CFS)	0.4450
24-Hr Clear Runoff Volume (AC-FT)	0.0930
24-Hr Clear Runoff Volume (CF)	4052

Analysis

Drywell Disposal Rate (CFS)	***0.01260***
Total Volume Infiltrated During 1st Phase (CF)	2.4
[2nd Phase] Storm Flow Rate Exceeds Drywell Disposal Rate @ (MIN)	6.2
Total Volume Infiltrated During 2nd Phase (CF)	1088.3
[3rd Phase] Drywell Disposal Rate Exceeds Storm Flow Rate @ (MIN)	1445.8
Total Volume Infiltrated During 3rd Phase (CF)	2.4
Total Time of Storm Event (MIN)*	1452
Total Volume Infiltrated as it Enters Drywell (CF)	***1093***
Total Storage within MaxWell System (CF)	4052
Remaining Detention Required (CF)	N/A

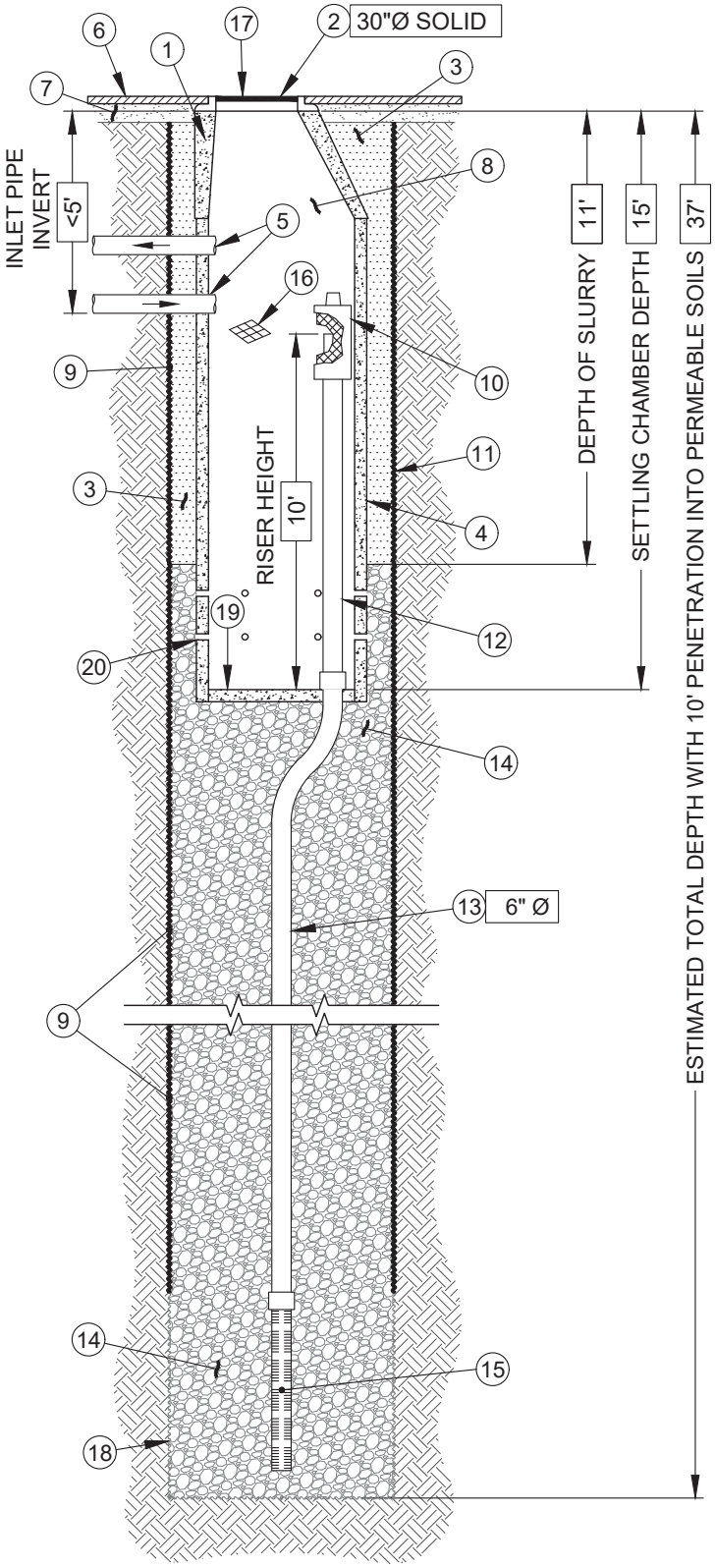


The MaxWell® IV

DRAINAGE SYSTEM DETAILS AND SPECIFICATIONS

600 Foothill Blvd

La Canada, CA



ITEM NUMBERS

1. **MANHOLE CONE** - MODIFIED FLAT BOTTOM.
2. **BOLTED RING & COVER** - DIAMETER & TYPE AS SHOWN. CLEAN CAST IRON PRESSURIZED COVER WITH GASKET (NEENAH R-6462-HH). BOLTED. RIM ELEVATION±0.02' OF PLANS.
3. **STABILIZED BACKFILL** - TWO-SACK SLURRY MIX.
4. **PRE-CAST LINER -** 4000 PSI CONCRETE 48" ID. X 54" OD. **CENTER IN HOLE** AND ALIGN SECTIONS **TO MAXIMIZE BEARING SURFACE.**
5. **INLET PIPE/OUTLET PIPE (BY OTHERS).** SEE SEPARATE PLAN FOR INVERT ELEVATIONS.
6. **GRADED BASIN OR PAVING** (BY OTHERS).
7. **COMPACTED BASE MATERIAL**, IF REQUIRED (BY OTHERS).
8. **FREEBOARD DEPTH VARIES** WITH INLET PIPE ELEVATION. INCREASE SETTLING CHAMBER DEPTH AS NEEDED TO MAINTAIN ALL INLET PIPE ELEVATIONS ABOVE RISER PIPE.
9. **NON-WOVEN GEOTEXTILE SLEEVE** - MIRAFI 140 NL. MIN. 6 FT Ø. HELD APPROX. 10 FEET OFF THE BOTTOM OF EXCAVATION.
10. **PUREFLO® DEBRIS SHIELD** - ROLLED 16 GA. STEEL X 24" LENGTH WITH VENTED ANTI-SIPHON AND INTERNAL 0.265" MAX. SWO FLATTENED EXPANDED STEEL SCREEN X 12" LENGTH. **FUSION BONDED EPOXY COATED**.
11. **MIN. 6' Ø DRILLED SHAFT.**
12. **RISER PIPE** - SCH. 40 PVC MATED TO DRAINAGE PIPE AT BASE SEAL.
13. **DRAINAGE PIPE** - ADS HIGHWAY GRADE OR SCH. 40 PVC WITH TRI-A COUPLER. SUSPEND PIPE DURING BACKFILL OPERATIONS. DIAMETER AS NOTED.
14. **ROCK** - WASHED, SIZED BETWEEN 3/8" AND 1-1/2".
15. **FLOFAST® DRAINAGE SCREEN** - SCH. 40 PVC 0.120" SLOTTED WELL SCREEN WITH 32 SLOTS PER ROW/FT. OVERALL LENGTH VARIES, UP TO 120" WITH TRI-B COUPLER.
16. **ABSORBENT** - HYDROPHOBIC PETROCHEMICAL SPONGE. MIN. 128 OZ. CAPACITY. TYPICAL, 2 PER CHAMBER.
17. **FABRIC SEAL** - U.V. RESISTANT GEOTEXTILE - **TO BE REMOVED BY CUSTOMER** AT PROJECT COMPLETION. GRATED ONLY.
18. **MIN. 6' Ø DRILLED SHAFT.**
19. **BASE SEAL** - CONCRETE SLURRY.
20. **6 PERFORATIONS MINIMUM PER FOOT, 2 ROWS MINIMUM.**

DETAIL : IV-6-SS-CA	REVISED BY: JMD	
DRAWN ON: 05-14-19	REVISED DATE: 01-27-21	SCALE: N.T.S

Manufactured and Installed by
TORRENT® RESOURCES
An evolution of McGuckin Drilling
www.torrentresources.com
CALIFORNIA 909-829-0740
ARIZONA 602-268-0785

REPORT OF GEOTECHNICAL INVESTIGATION

OAKMONT SENIOR LIVING OF LA CAÑADA FLINTRIDGE

600 FOOTHILL BOULEVARD

LA CAÑADA FLINTRIDGE, CALIFORNIA

FOR

OAKMONT SENIOR LIVING

APRIL 21, 2017

JOB NO. 2017-005-001

RTF&A

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

April 21, 2017

Oakmont Senior Living
9240 Old Redwood Hwy, Suite 200
Windsor, California 95492

Job No. 2017-005-001

Attention: Mr. Ken Kidd

Subject: Geotechnical Investigation
Oakmont Senior Living of La Cañada Flintridge
600 Foothill Boulevard
La Cañada Flintridge, California

Ladies/Gentlemen:

Transmitted herewith is our Report of Geotechnical Investigation prepared for the Oakmont Senior Living proposed to be constructed at the subject site. As discussed later in this submittal, the recommendations presented herein are considered to be preliminary and subject to revision pending the preparation of detailed plans indicating final grades for the proposed development. The investigation was performed in general accordance with the scope of services outlined in our "Proposal – Geotechnical Investigation," dated February 14, 2017 (P014-2017-001). Copies of this report have been distributed to others as indicated below.

It is our understanding that the project is currently in the design phase and plans indicating specifics of the proposed development, such as final grades, are not presently available. The results of our investigation indicate that fill soils, ranging in depth from about 1 to 4 feet, were observed in each of our subsurface explorations. The fill soils were underlain by naturally deposited alluvial soils. The naturally deposited soils were generally observed to be slightly moist to moist and medium dense. Groundwater was not encountered during the subsurface exploration of the site.

The results of our geotechnical investigation and engineering analysis indicate that the existing fill should be removed and recompacted in areas where buildings, pavement, and related improvements will be constructed. In addition, it will be required to remove and recompact the naturally deposited alluvial soils that occur within 3 feet of the bottoms of proposed foundations.

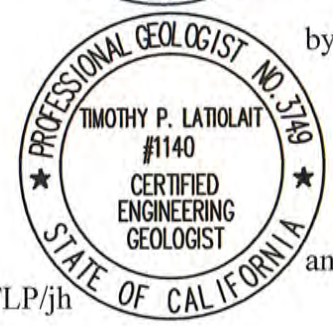
The areas and depths of the recommended removal and recompaction are discussed in the "Recommendations" section of this report. Conventional spread foundations seated in the recompacted fill may be used to provide support for the proposed buildings, pavement, and related improvements. Recommendations for grading in areas where improvements are planned are presented in the "Recommendations" section of this report.

As part of our geotechnical investigation and as discussed in our authorized proposal, an infiltration study was performed at the site. Further information regarding the results of our infiltration study is presented in the "Infiltration Testing" section of the report.

If you should have questions regarding this report, please do not hesitate to contact our firm.

Yours very truly,

R. T. FRANKIAN & ASSOCIATES



by: Alan W. Rasplicka
Principal Geotechnical Engineer

and: Timothy P. Latiolait
Principal Engineering Geologist

BKP/AWR/TLP/jh

PDF Distribution via Email:
– Oakmont Senior Living, Attn: Mr. Ken Kidd and Mr. Gregg Wanke
– Alliance Land Planning and Engineering, Attn: Mr. Jason Vroom

RTF&A
GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

Oakmont Senior Living
April 21, 2017
2017-005-001

TABLE OF CONTENTS

ATTACHMENTS:

Plot Plan
Appendix A – Explorations
Appendix B – Laboratory Tests
Appendix C – Boring Percolation Testing Procedures and Results

RTF&A
GEOTECHNICAL ENGINEERING & ENGINEERING GEOLOGY

LIQUEFACTION

The Seismic Hazard Zone Map for the subject site indicates that the subject site is not classified as being potentially susceptible to liquefaction. Accordingly, a liquefaction evaluation was not performed at the subject site.

INFILTRATION TESTING

Infiltration testing was performed within Borings IB-1 through IB-2. Monitoring wells were installed in each of the borings and tests were conducted to determine the rate at which water infiltrates into the soil within the lower 12 inches of the boring. The tests were performed within the alluvial soils at a depth of approximately 4 feet below the existing site grades.

The tests were performed in accordance with the Boring Percolation Test Procedure method presented in the County of Los Angeles Department of Public Works (LACDPW), "Guidelines for Design, Investigation, and Reporting Low Impact Development Stormwater Infiltration" (Form GS200.1, dated December 31, 2014). The boring percolation testing procedures and results have been summarized in Appendix C of this report.

Field infiltration rates were obtained from each of the tests and then corrected for borehole diameter. The rates were then adjusted for LACDPW required reduction factors for site variability and number of tests (CFv) and long-term siltation, plugging, and maintenance (CFs), which further reduces the field infiltration rate. A value of 2 was used for CFv and a value of 2 was used for long-term siltation, plugging, and maintenance (CFs). RTF&A does not take responsibility for these factors as they are dependent upon the future infiltration design details, future maintenance, and number and location of future site infiltration. These reduction factors may be increased or decreased by the infiltration designer based upon their experience and specific design details of the infiltration system, including maintenance frequency.

When the corrections for borehole diameter and LACDPW required reduction factors are applied, the corrected field infiltration rate of the alluvial soils was 0.5 in/hr within Boring IB-1 and 1.9 in/hr with Boring IB-2.

LACDPW requires a minimum field infiltration rate, with consideration of applicable correction factors, of 0.3 in/hr. The field infiltration testing at each of the borings resulted in infiltration rates that exceed the minimum required by LACDPW at the locations and depths tested within native soils. It is recommended that infiltration at the site only be within alluvial soils and not within future compacted fills. Groundwater was not encountered in any of the test borings that were drilled for the subject investigation and extended to depths of as much as 26 feet below the existing grade. It is recommended that the invert elevation for infiltration be no lower than about 15 feet below existing site grades. Once infiltration locations and elevations are determined, we can provide additional geotechnical input relative to infiltration rates and elevations.

Boring Location	Material	Field Infiltration Rate (in/hr)	Borehole Corrected Field Infiltration (in/hr)	CF_v	CF_s	Calculated Field Infiltration (in/hr)
IB-1	Alluvium (native)	12.0	2.1	2	2	0.5
IB-2	Alluvium (native)	42.2	7.52	2	2	1.9

The design of the on-site infiltration should take into consideration the following Los Angeles County setbacks:

- the infiltration basin should maintain a setback of at least 5 feet from adjacent property lines and public right-of-way;
- the infiltration basin should be located at least 15 feet from, or beyond a 1:1 plane drawn down from, the bottom of any existing or future foundations;
- the infiltration point of discharge should be set back at least 10 feet (measured horizontally) from existing drainage courses; and
- the infiltration basin should be set back a horizontal distance of 5 feet or H/2, where H equals the slope height, whichever is greater, from the face of any descending slope.

Oakmont Senior Living
April 21, 2017
2017-005-001

APPENDIX C

BORING PERCOLATION TESTING PROCEDURES AND RESULTS

The Boring Percolation Test Procedure method utilized as part of the subject infiltration study was performed within two separate 4-inch-diameter hand auger borings. Each test was performed after presoaking the boring sidewall soils by filling an installed casing with water and allowing the water level to drop in successive cycles. The water levels were periodically monitored during testing and was recorded. Each test cycle is performed up to eight times but may be stopped if three successive cycles yield a relatively uniform infiltration rate. The field procedures are as follows:

- Each boring was initially excavated to the desired depth and then a 2-inch-diameter PVC pipe casing was installed for the full depth of the boring. The lower portion of the casing was perforated with slots greater than 0.02 inches in width and was capped at the bottom.

- The perforated portion of the pipe was then surrounded with a filter pack consisting of washed gravel. After installation of the filter materials, the boring was then pre-soaked by filling the lower portion of the casing with water and maintaining a level that was at least 12 inches above the bottom of the casing.

- The casing was then refilled with water up to a level at least 12 inches above the bottom of the pipe. The water level was allowed to drop and the depth of the water level was measured at regular intervals. At the completion of the test cycle, the water level was again measured and recorded, signifying the end of that test cycle.

- The casing was then refilled with water and the next test cycle was initiated. The test cycles were repeated up to a total of eight times to complete the series of tests within the boring, but may have been stopped if three successive cycles yield a relatively uniform drop.

BORING PERCOLATION TESTING FIELD LOG

		Job No.	2017-005-001
Project	Oakmont La Canada	Boring Designation	BORING IB-1
Material	Fill	Boring Diameter (in)	4
Tested by	S. Rudd	Depth of Boring (ft)	4
Pre Soak	Completed - 4 hours		
Length of Pipe (ft)	3.89		

Reading Number	Elapsed Time (mins)	Water Start Depth (in)	Water End Depth (in)	Water Drop (inches)	PercolationRate For Reading (in/hr)	Borehole Reduction Factor (Rf)	Borehole Corrected Infiltraton Rate (in/hr)
1	30.00	12.60	6.00	6.60	13.20	5.65	2.34
2	30.00	12.84	5.88	6.96	13.92	5.68	2.45
3	30.00	12.24	6.84	5.40	10.80	5.77	1.87
4	30.00	13.32	6.84	6.48	12.96	6.04	2.15
5	30.00	12.00	6.96	5.04	10.08	5.74	1.76
6	30.00	12.72	6.12	6.60	13.20	5.71	2.31

Average Field Percolation Last 3 Trials (in/hr)	12.00
Average Rf Adjusted Percolation Rate Last 3 Trials (in/hr)	2.07
CFv	2
CFs	2
Design Infiltration Rate (in/hr)	0.52

BORING PERCOLATION TESTING FIELD LOG

		Job No.	2017-005-001
Project	Oakmont La Canada	Boring Designation	BORING IB-2
Material	Fill	Boring Diameter (in)	4
Tested by	S. Rudd	Depth of Boring (ft)	4
Pre Soak	Completed - Drained completely in 30 minutes 2 times		
Length of Pipe (ft)	3.87		

Reading Number	Elapsed Time (mins)	Water Start Depth (in)	Water End Depth (in)	Water Drop (inches)	PercolationRate For Reading (in/hr)	Borehole Reduction Factor (Rf)	Borehole Corrected Infiltraton Rate (in/hr)
1	10.00	12.96	5.76	7.20	43.20	5.68	7.61
2	10.00	12.60	5.76	6.84	41.04	5.59	7.34
3	10.00	12.60	5.52	7.08	42.48	5.53	7.68
4	10.00	12.48	5.28	7.20	43.20	5.44	7.94
5	10.00	12.84	5.40	7.44	44.64	5.56	8.03
6	10.00	12.72	5.64	7.08	42.48	5.59	7.60

Average Field Percolation Last 3 Trials (in/hr)	42.24
Average Rf Adjusted Percolation Rate Last 3 Trials (in/hr)	7.52
CFv	2
CFs	2
Design Infiltration Rate (in/hr)	1.88

ONSITE HYDROLOGY REPORT

Oakmont Senior Living

City of La Cañada Flintridge

600 Foothill Blvd.
La Cañada Flintridge, CA 91011

Prepared For:
Oakmont Senior Living
220 Concourse Blvd
Santa Rosa, CA 95403

Prepared By:
Alliance Land Planning & Engineering, Inc.
2248 Faraday Ave.
Carlsbad, CA 92008

May 2017
Job No. 1486

TABLE OF CONTENTS

LIST OF TABLES

APPENDICES

Project Overview

This hydrology report has been designed for the proposed Oakmont senior living center at 600 Foothill Blvd in City of La Cañada Flintridge in County of Los Angeles, California. The 1.33 ac site is currently developed and is grounds of a vacant church site. A full site redevelopment is proposed for the transition to senior living facility. Overall site imperviousness will remain unchanged despite additional landscaped features being incorporated into the proposed design.

Existing Condition

The existing 1.33 acre site is currently a vacant church site consisting of two main structures, asphalt paved parking lot, and landscaped buffer areas.

Existing drainage patterns run from the northwest to the southeast corners of the site. Flow patterns are split in two directions as the travel around each side of the buildings but converge at the southeast corner of the site prior to outlet. Existing condition runoff is comprised entirely of sheet flow and outlets the site into the City curb and gutter at the southeast corner at Woodleigh Lane. The site is not considered to be in a sump condition.

No private stormdrain or water quality facilities are known to exist.

Developed Conditions

The developed condition site will remain at 1.33 ac in size and will consist of a main care center multi-story building, a church, asphalt paved parking lots, landscaped planters and landscaped buffer areas. A new private underground stormdrain system will convey water to a system of drywells for water quality treatment prior to offsite discharge. Existing condition flow patterns will not be altered and flow will continue to run from northeast to southwest corner of the site. Flow is proposed to outlet the site into Woodleigh Lane via a sidewalk culvert at the southwest corner of the site. The developed site is not considered to be in a sump condition.

Methodology & Design Criteria

Existing and developed condition hydrologic models were developed using the Los Angeles County Modified Rational Method via the latest HydroCalc software. This method is considered relevant given the site is less than 10 acres in size.

Hydrologic inputs were taken from the Pasadena 50-Year 24-Hour Isohyetal Map No. 1-H1.29. The project is located within the 8.2" 50-Year Isohyet with Soil Type 007. The Isohyet Map has been provided for reverence in the Appendix B of this report. Model parameters including Tc data have been summarized in Appendix C of this report for both existing and developed conditions

It should be mentioned that a non-sump condition exists for both the existing condition and the developed condition site. Furthermore, site parameters such as acreage, overall imperviousness, and time of concentration are generally identical across both site conditions. For this reason, only the 25-yr storm event has been modeled.

Results

Peak flowrates and runoff volume for the developed and existing conditions are summarized in the Table 1 below. Since existing and developed condition input parameters are generally the same, there is no change in the peak flowrate or runoff volume that is reported.

Table 1 - Summary of Hydrologic Results

CONDITION	BASIN	AREA	FREQUENCY	FLOWRATE	VOLUME
		ac	yr	cfs	ac-ft
EXIST	A	1.33	25	5.04	0.64
DEVELOPED	A	1.33	25	5.04	0.64
Δ	A	0.00	25	0.00	0.00

HydroCalc output can be found in Appendix D.

Hydromodification

The hydrology results above show no change to peak flowrate or runoff volume will arise after development of this project. Given the similarity of hydrologic input parameters, this trait will be consistent across the 2-, 5-, 10-, and 50-yr return periods. Mitigation for excess peak flowrate or runoff volume is therefore not considered to be required for this project.

Conclusion

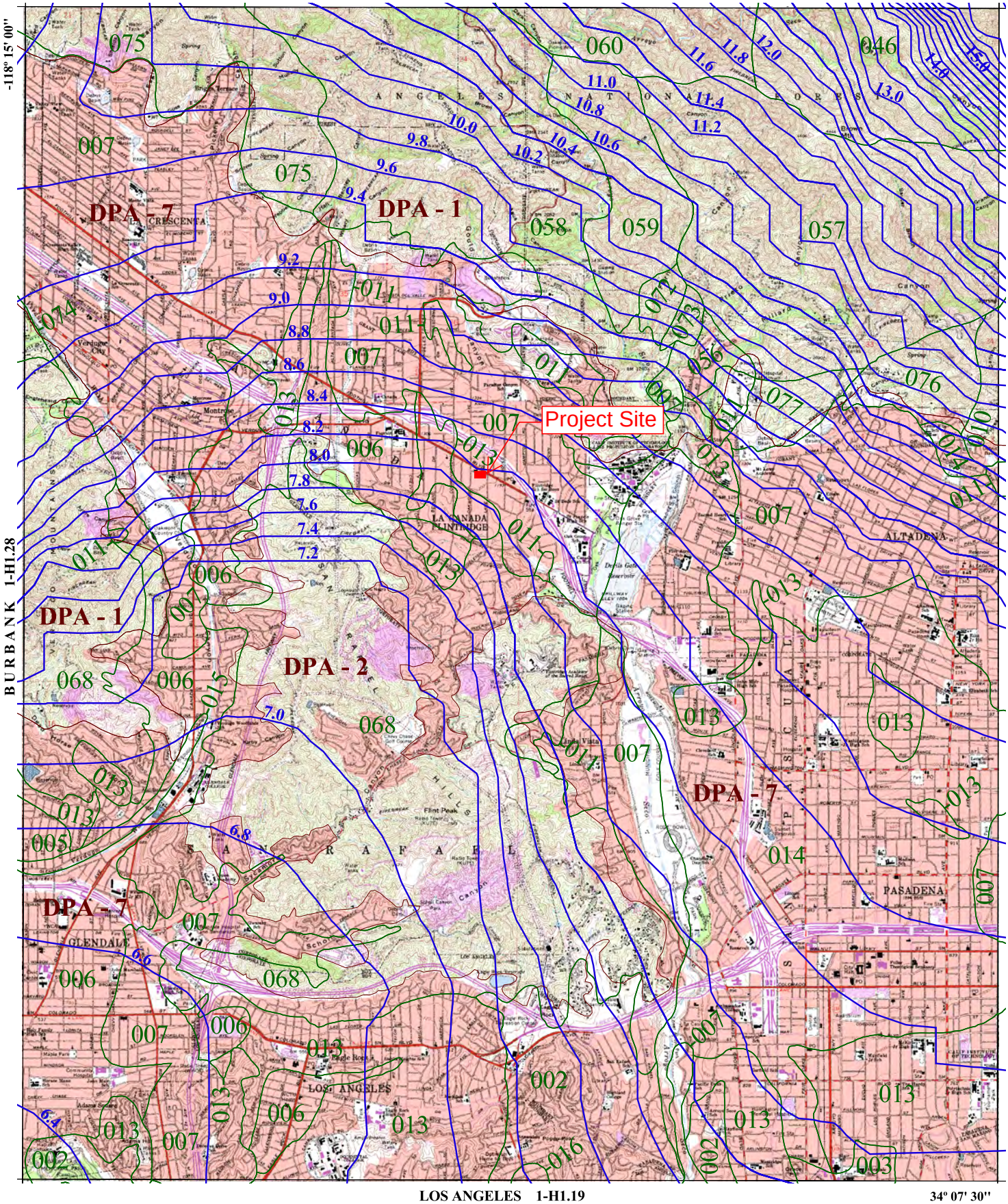
Since no significant change in land use, imperviousness, slope, or flowpath length is proposed, no impacts have been calculated to result from the proposed Oakmont site design. However, an improved overall drainage system is expected due to installation of private underground stormdrain system. In addition, the water quality component (dry wells) to be incorporated into the site proposed design will benefit the environment above what currently exists today.

For these reasons, the proposed Oakmont facility at 600 Foothill Blvd in the City of La Cañada Flintridge is considered acceptable.

APPENDIX A

50-YR, 24 –HR ISOHYETAL MAP
'PASADENA'

ATTACHMENT 7 - 6/14



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

N W E S

1 0 1 2 Miles

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

PASADENA
50-YEAR 24-HOUR ISOHYET

1-H1.29

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

APPENDIX B

HYDROLOGIC PARAMETER SUMMARY

Summary of Hydrologic Parameters

CONDITION	BASIN	AREA		FLOWPATH	HI	LO	SLOPE	50-Yr ISO	IMP	SOIL	Tc
		sf	ac	ft	ft	ft	ft/ft	in	%	#	min
EXIST	A	57791.62	1.33	465	1220.0	1203.0	0.0366	8.2	87	7	5
DEVELPED	A	57791.62	1.33	510	1220.0	1205.0	0.0294	8.2	87	7	5

Summary of Hydrologic Results

CONDITION	BASIN	AREA	FREQUENCY	FLOWRATE	VOLUME
		ac	yr	cfs	ac-ft
EXIST	A	1.33	25	5.04	0.64
DEVELOPED	A	1.33	25	5.04	0.64
Δ	A	0.00	25	0.00	0.00

APPENDIX C

HYDROCALC SOFTWARE OUTPUT

Peak Flow Hydrologic Analysis

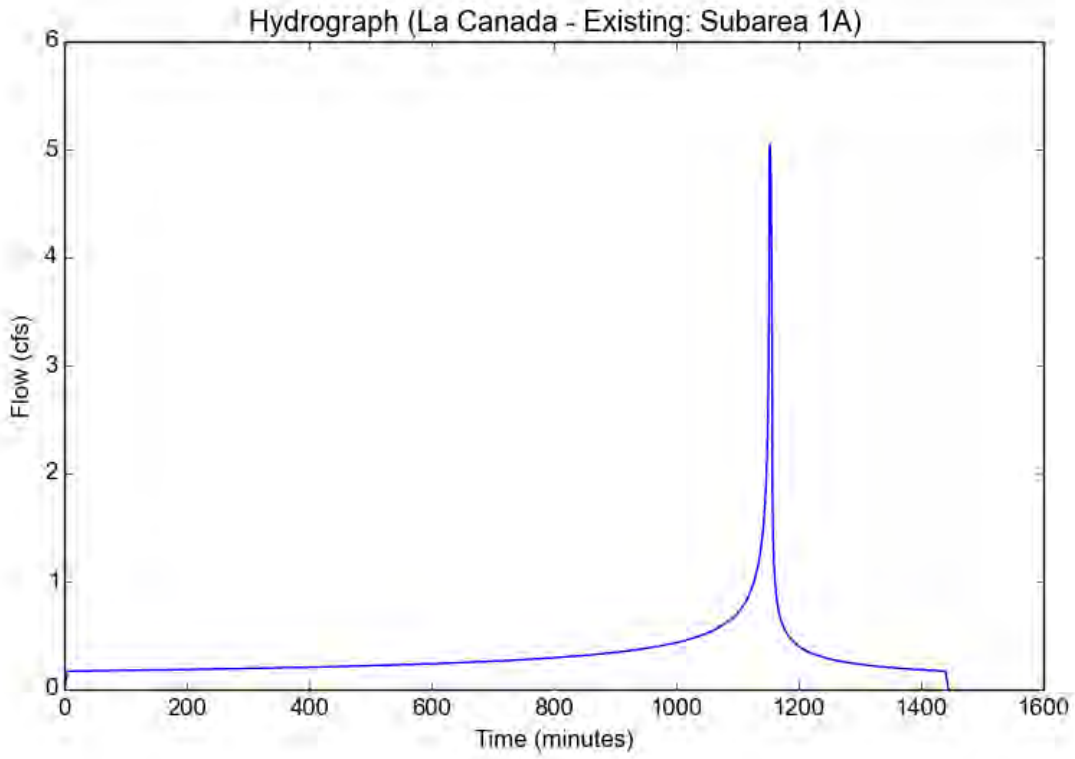
File location: C:/Users/Janna/Desktop/1486-La Cananda/HYDROCALC/La Canada - Existing - Subarea 1A.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	La Canada - Existing
Subarea ID	Subarea 1A
Area (ac)	1.33
Flow Path Length (ft)	465.0
Flow Path Slope (vft/hft)	0.0366
50-yr Rainfall Depth (in)	8.2
Percent Impervious	0.87
Soil Type	7
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	7.1996
Peak Intensity (in/hr)	4.2955
Undeveloped Runoff Coefficient (Cu)	0.7624
Developed Runoff Coefficient (Cd)	0.8821
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	5.0395
Burned Peak Flow Rate (cfs)	5.0395
24-Hr Clear Runoff Volume (ac-ft)	0.636
24-Hr Clear Runoff Volume (cu-ft)	27704.9238



Peak Flow Hydrologic Analysis

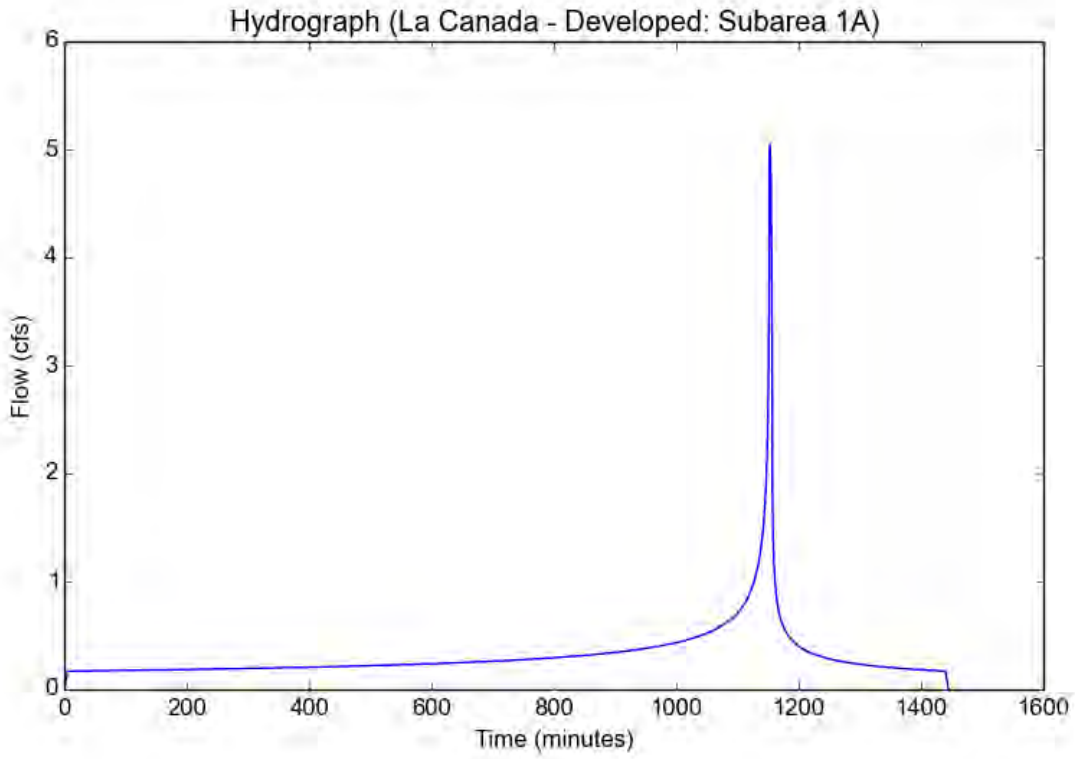
File location: I:/Project Files/1486 - LA CANADA/HYDROLOGY/HYDROCALC/La Canada - Developed - Subarea 1A.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	La Canada - Developed
Subarea ID	Subarea 1A
Area (ac)	1.33
Flow Path Length (ft)	510.0
Flow Path Slope (vft/hft)	0.0294
50-yr Rainfall Depth (in)	8.2
Percent Impervious	0.87
Soil Type	7
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	7.1996
Peak Intensity (in/hr)	4.2955
Undeveloped Runoff Coefficient (Cu)	0.7624
Developed Runoff Coefficient (Cd)	0.8821
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	5.0395
Burned Peak Flow Rate (cfs)	5.0395
24-Hr Clear Runoff Volume (ac-ft)	0.636
24-Hr Clear Runoff Volume (cu-ft)	27704.9238



APPENDIX D

EXISTING AND DEVELOPED CONDTION HYDROLOGY MAPS

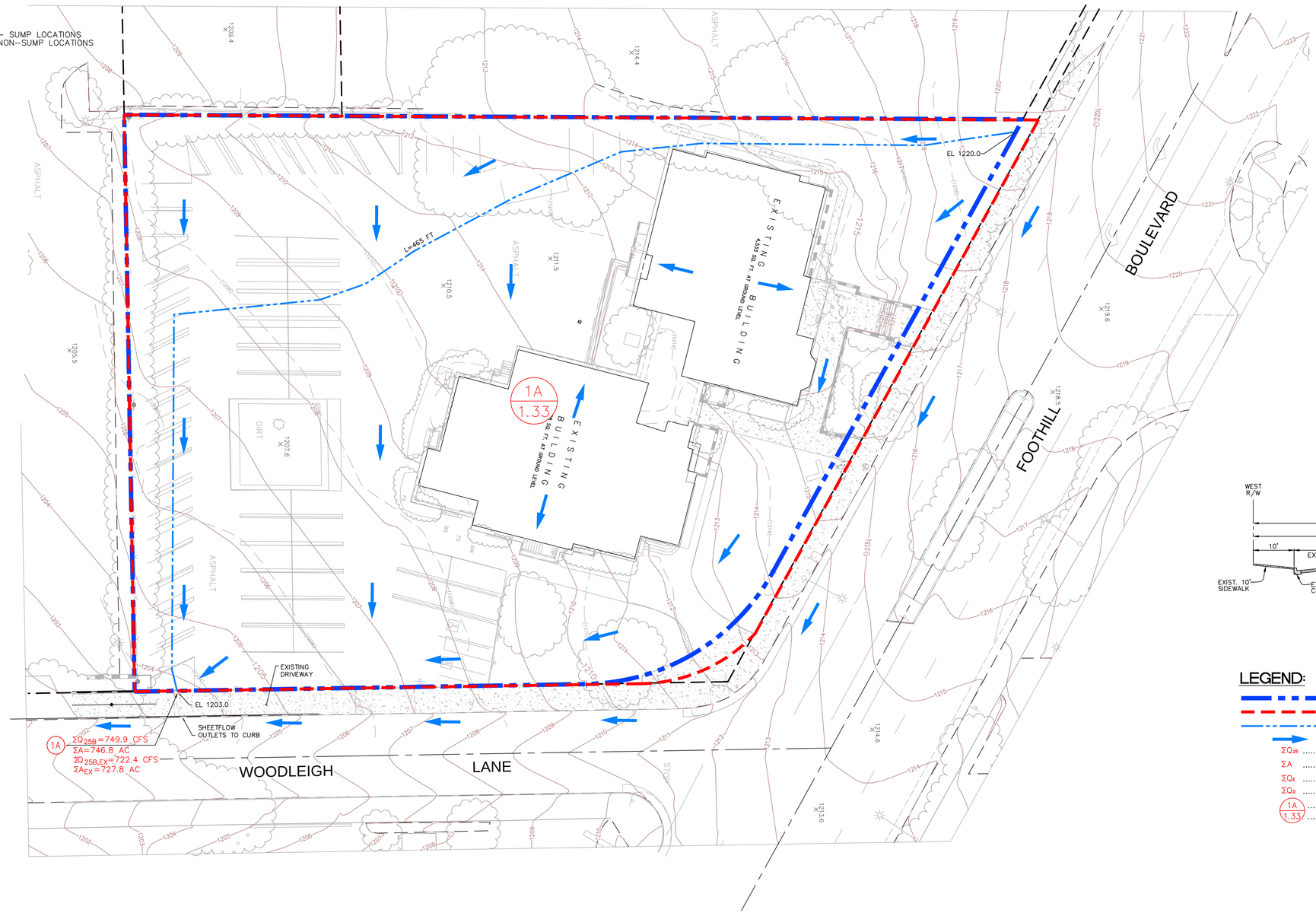
OAKMONT
EXISTING CONDITION HYDROLOGY

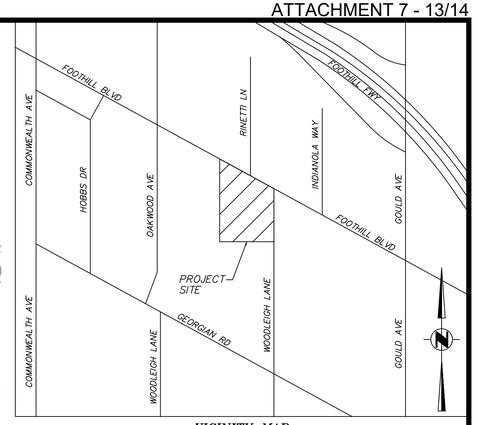
NOTES:

1. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
2. DEDICATE THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
3. PROVIDE VEHICULAR ACCESS TO ALL INLETS AND OUTLETS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT.
4. APPROVAL OF THE HYDROLOGY PLAN DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5.
5. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.

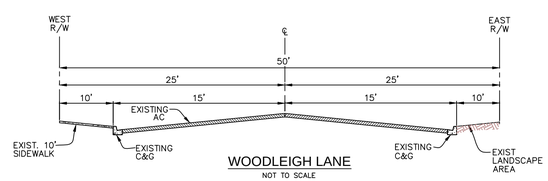
DESIGN CRITERIA:

STORM EVENT	50 YR. – SUMP LOCATIONS 25 YR. NON–SUMP LOCATIONS
50–YR 24 HR RAINFALL ISOHYET	8.2
SOIL TYPE	007
SITE IMPERVIOUSNESS	87%
TIME OF CONCENTRATION (Tc)	5 MIN





VICINITY MAP
NOT TO SCALE



WOODLEIGH LANE
NOT TO SCALE

LEGEND:

	PROPERTY LINE
	PRIMARY BASIN LIMITS
	FLOWLINE
	FLOW ARROW
ΣQ_{25}	SUMMATION OF 25 YR. FREQUENCY FLOWRATE
ΣA	SUMMATION OF AREA IN ACRES
ΣQ_E	SUMMATION OF EXISTING CONDITION FLOW
ΣQ_D	SUMMATION OF DEVELOPED CONDITION FLOW
1A	DRAINAGE AREA DESIGNATION
1.33	DRAINAGE AREA IN ACRES

SCALE: 1"=20'

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

ALLIANCE
LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431–9896
FAX:(760) 431–8802
27451 TOURNEY ROAD
SUITE 140
VALENCIA, CA 91355
TEL: (661) 799–2760
FAX: (661) 254–1929
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE., CARLSBAD, CA 92008
(760) 431–9896

PLANS PREPARED UNDER THE DIRECTION OF:

JASON F. VROOM NO. 61297 — 5/18/17 DATE

REGISTERED PROFESSIONAL ENGINEER — JASON F. VROOM — NO. 61297 EXP 6–30–17 — CIVIL — STATE OF CALIFORNIA

PLANS PREPARED FOR:
OWNER NAME: OAKMONT SENIOR LIVING
STREET ADDRESS: 220 CONCOURSE BLVD. SANTA ROSA, CA 950403
ATTN: ATTN: KEN KIDD (707) 535–3249

BENCHMARK
LOS ANGELES COUNTY PUBLIC WORKS BENCHMARK NO.: 4510
DESCRIPTION/LOCATION:
RAM SET IN S CB 1M(3.3FT) W/O BCR @ SW COR FOOTHILL BLVD. & GOULD AVENUE.
ELEVATION: 1195.017 FT.

PROPERTY OWNER:
OWNER NAME: OAKMONT SENIOR LIVING
STREET ADDRESS: 220 CONCOURSE BLVD. SANTA ROSA, CA 950403
ATTN: ATTN: KEN KIDD (707) 535–3249

SHEET 1	CITY OF LA CANADA	SHEET 1

OAKMONT
EXISTING CONDITION HYDROLOGY
LOS ANGELES COUNTY, CALIFORNIA
600 FOOTHILL BLVD.
LA CAÑADA FLINTRIDGE, CA 91011

LA CANADA EXISTING CONDITION HYDROLOGY

I:\CAD\1486\HYDROLOGY\1486–HYDROLOGY_EX.dwg

PLAN PREPARATION DATE: 05/18/17

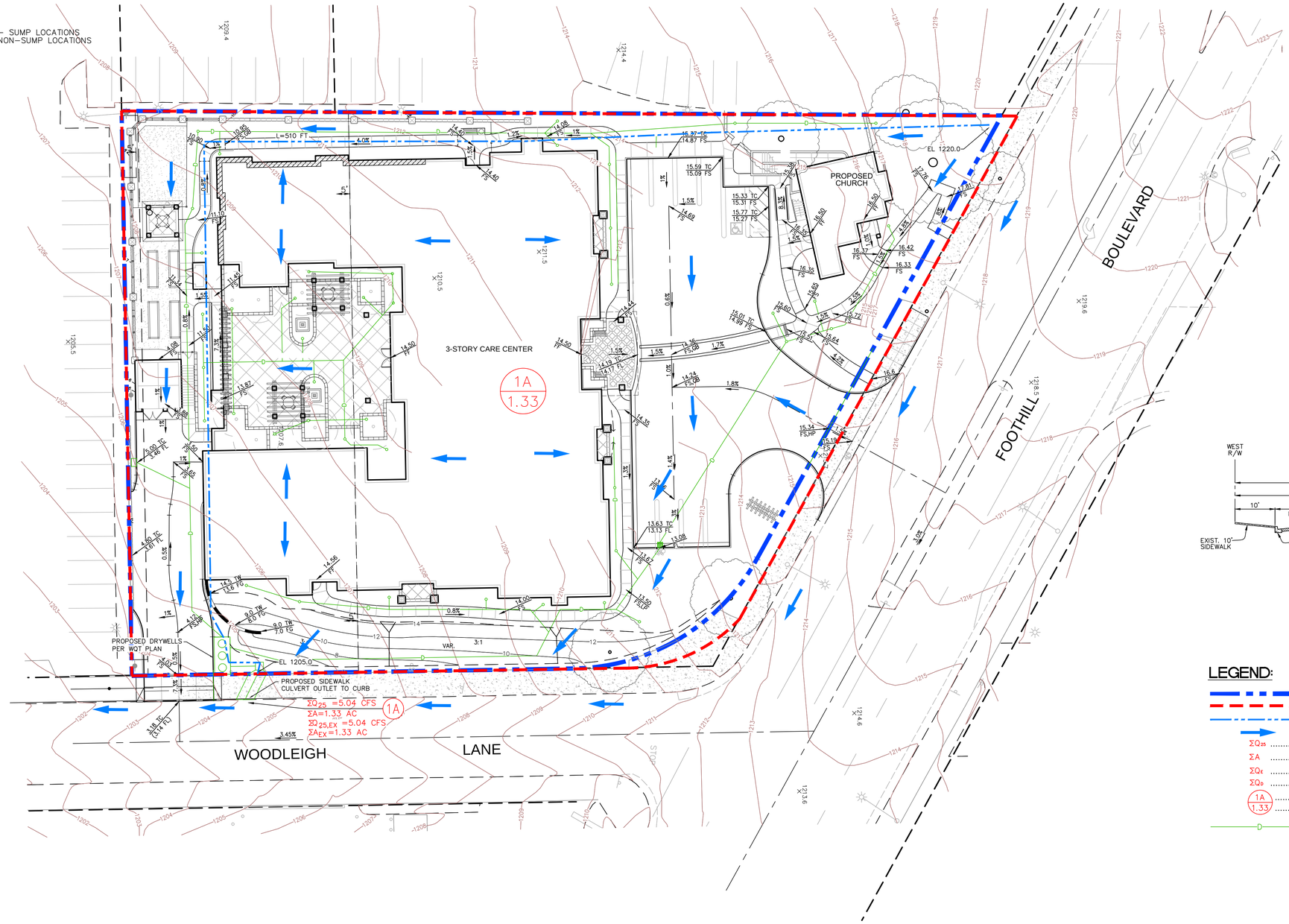
OAKMONT
DEVELOPED CONDITION HYDROLOGY

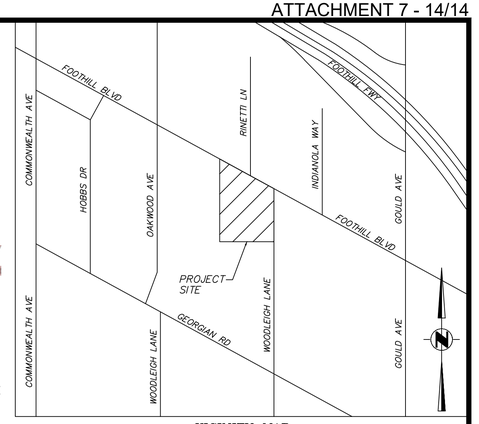
NOTES:

1. COMPLY WITH ALL STREET DRAINAGE REQUIREMENTS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
2. DEDICATE THE NECESSARY EASEMENTS FOR THE STORM DRAIN SYSTEM TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES.
3. PROVIDE VEHICULAR ACCESS TO ALL INLETS AND OUTLETS TO THE SATISFACTION OF THE COUNTY OF LOS ANGELES FLOOD CONTROL DISTRICT.
4. APPROVAL OF THE HYDROLOGY PLAN DOES NOT CONSTITUTE DETERMINATION THAT THE OFFSITE IMPROVEMENTS ARE REQUIRED WITHIN THE MEANING OF GOVERNMENT CODE SECTION 66462.5.
5. HYDROLOGY INFORMATION AND STORM DRAIN ALIGNMENTS SHOWN ARE NOT NECESSARILY APPROVED.

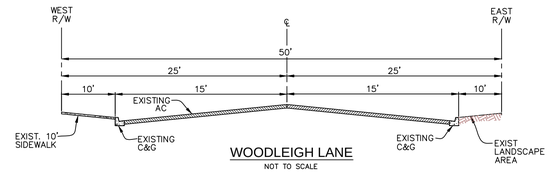
DESIGN CRITERIA:

STORM EVENT	50 YR. – SUMP LOCATIONS 25 YR. NON–SUMP LOCATIONS
50–YR 24 HR RAINFALL ISOHYET	8.2
SOIL TYPE	007
SITE IMPERVIOUSNESS	87%
TIME OF CONCENTRATION (Tc)	5 MIN





VICINITY MAP
NOT TO SCALE



WOODLEIGH LANE
NOT TO SCALE

LEGEND:

.....	PROPERTY LINE
.....	PRIMARY BASIN LIMITS
.....	FLOWLINE
.....	FLOW ARROW
ΣQ_{25}	SUMMATION OF 25 YR. FREQUENCY FLOWRATE
ΣA	SUMMATION OF AREA IN ACRES
ΣQ_E	SUMMATION OF EXISTING CONDITION FLOW
ΣQ_D	SUMMATION OF DEVELOPED CONDITION FLOW
1A	DRAINAGE AREA DESIGNATION
1.33	DRAINAGE AREA IN ACRES
.....	PROPOSED DRAIN LINE

SCALE: 1"=20'

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 inch = 20 ft.

ALLIANCE
LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE.
CARLSBAD, CA 92008
TEL: (760) 431–9896
FAX:(760) 431–8802
27451 TOURNEY ROAD
SUITE 140
VALENCIA, CA 91355
TEL: (661) 799–2760
FAX: (661) 254–1929
CIVIL ENGINEERING • LAND PLANNING • HILLSIDE DESIGN • SURVEYING

PLANS PREPARED BY:
ALLIANCE LAND PLANNING & ENGINEERING INC.
2248 FARADAY AVE., CARLSBAD, CA 92008
(760) 431–9896

PLANS PREPARED UNDER THE DIRECTION OF:

JASON F. VROOM NO. 61297 — 5/18/17 DATE

REGISTERED PROFESSIONAL ENGINEER
JASON F. VROOM
NO. 61297
EXP 6–30–17
CIVIL
STATE OF CALIFORNIA

PLANS PREPARED FOR:

OWNER NAME: OAKMONT SENIOR LIVING
STREET 220 CONCOURSE BLVD.
ADDRESS SANTA ROSA, CA 950403
ATTN: ATTN: KEN KIDD (707) 535–3249

BENCHMARK

LOS ANGELES COUNTY PUBLIC WORKS BENCHMARK NO.: 4510

DESCRIPTION/LOCATION:
RAM SET IN S CB 1M(3.3FT) W/O BCR @ SW COR FOOTHILL BLVD. & GOULD AVENUE.

ELEVATION: 1195.017 FT.

PROPERTY OWNER:

OWNER NAME: OAKMONT SENIOR LIVING
STREET 220 CONCOURSE BLVD.
ADDRESS SANTA ROSA, CA 950403
ATTN: ATTN: KEN KIDD (707) 535–3249

SHEET 1 — CITY OF LA CANADA — SHEET 1

OAKMONT
DEVELOPED CONDITION HYDROLOGY
LOS ANGELES COUNTY, CALIFORNIA
600 FOOTHILL BLVD.
LA CAÑADA FLINTRIDGE, CA 91011

PLAN PREPARATION DATE: 05/18/17

I:\CAD\1486\HYDROLOGY\1486–HYDROLOGY_DEV.dwg

LA CANADA DEVELOPED CONDITION HYDROLOGY