APPENDIX I

Hydrology Study

PSOMAS

100 TUJUNGA AVE
103 VERDUGO AVE
BURBANK, CA
DRAINAGE / HYDROLOGY STUDY

July 14, 2016

DRAINAGE / HYDROLOGY STUDY

For:
100 Tujunga Ave
103 Verdugo Ave
Burbank, CA

PSOMAS Project No: 1CUC010100

Submitted to:
City of Burbank
Community Development Department
Building Division
150 N. Third Street
Burbank, CA 91502

Prepared for:
Cusumano Real Estate Group
101 South First Street, Suite 400
Burbank, CA 91502
(818) 841-5800

Project Site Location/Address:
100 Tujunga Ave
103 Verdugo Ave
Burbank, CA 91741

LID Prepared by:
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LID Preparation Date:
July 14, 2016

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1.0 Introduction

1.1 Project Background

The project is located at 100 Tujunga Ave & 103 Verdugo Avenue in the City of Burbank and is next to the Holiday Inn (0.2 mile from the 5 freeway). The project site is on First Street between East Tujunga Avenue and East Verdugo Avenue. See location and vicinity map in *Appendix 2*. The project site is bounded by commercial developments. It is currently occupied by a two story office building as well as an at grade parking lot. The proposed development will be comprised of two 14-story towers. Phase 1 consists of a single 14-story residential tower with a total of 154 multifamily units. For the second phase, there are two options. The first option (Phase 2A) proposes a 14 story hotel with 126,000 square-feet of hotel space (230 rooms). The second option (Phase 2B) proposes a 14-story office building with approximately 159,000 square-feet of office space.

2.0 Site Characterization

Current Property Use: Two story office building and at grade parking lot.

Proposed Property Use: Two fourteen story towers

Availability of Soils Report: The soil of the watershed is classified as Type 013, as shown in the Burbank quadrant of Hydrologic Map figure LACDPW 1-H1.28, found in *Appendix 1*. The project area to be disturbed is approximately 1.76 acres in size. The total tributary watershed area to be studied is approximately 1.76 acres in size.

3.0 Hydrology

3.1 General Approach

The watershed of the project was identified and characterized for both existing and proposed conditions. Computer modeling was used to estimate the runoff flowrate for the 50-year storm event.

3.2 Data Sources

The primary sources of data were the Los Angeles County Department of Public Works Low Impact Development Manual (February 2014).

3.3 Watershed Characteristics

Rainfall and soil characteristics for 100 Tujunga Ave & 103 Verdugo Ave project site are given in the Los Angeles Quadrant of Isohyetal Map Figure LACDPW 1-HI.28 (Appendix 1). The 50-year (24-hour) rainfall Isohyet nearest the project area is approximately 7.1 inches. As per the Isohyetal Map, the soil classification of the project site falls into Soil Type 013. The project area to be disturbed is approximately 1.9 acres. The total tributary area to be studied is approximately 1.9 acres.

The isohyet for all of the storm events are as listed:

- LID: 85th Percentile
- 50-Year 24-Hour: 7.1-inches

The *LACDPW HydroCalc* program was used to calculate the time of concentration and peak runoff flow rate for existing and proposed conditions.

3.4 Existing Condition Results

The existing condition hydrologic analysis was based on the Existing Condition Site Plan prepared by Psomas, included in *Appendix 4*. The proportion of impervious site area for the project's entire tributary area was determined to be 95%. Existing condition hydrology results for the 50-year storm event are summarized in Table 1 below.

Table 1: Existing Hydrology, 50-year Storm Event

Sub-area	Area (acre)	TC (min)	% Imp	Q50 (cfs)
1A	0.34	5	95	1.30
2A	0.27	5	95	1.03
3A	0.27	5	95	1.03
5B	0.87	5	95	3.37
			Σ	6.73

3.5 Proposed Condition Results

The proposed condition hydrologic analysis was based on the Proposed (developed) Condition Site Plan prepared by Psomas, included in *Appendix 4*.

The proposed drainage is divided into two sub-areas (A and B).

Sub-area A includes the roof runoff collected by the roof drains and site drains that are routed to the southern edge of the site along First Street which will be collected into a harvesting system and used for irrigation of proposed landscape. The overflow will exit the project site via a curb drain along First Street.

Sub-area B includes the roof runoff collected by the roof drains and site drains that are routed to the southern edge of the site along First Street which will be collected into a harvesting system and used for irrigation of proposed landscape. The overflow will exit the project site via a curb drain along First Street.

The proportion of the impervious site area, based on proposed site conditions, was determined to be about 95%. Proposed condition hydrology results for the 50-year storm event are summarized in Table 2 below.

Table 2: Proposed Hydrology, 50-year Storm Event

Hotel and Residential:

Sub-area	Area (acre)	TC (min)	% Imp	Q50 (cfs)
A	0.88	5	93	3.37
B	0.88	5	95	3.36
			Σ	6.73

Office and Residential:

Sub-area	Area (acre)	TC (min)	% Imp	Q50 (cfs)
A	0.88	5	94	3.37
B	0.88	5	95	3.36
			Σ	6.73

3.6 Baseline Hydrology Comparison

A comparison of existing and proposed peak flow rates is provided in Table 3 below.

Table 3: Existing vs. Proposed Condition Hydrology Comparison Summary

50-Year Storm Event				
Drainage Area	Area (ac)		Q_{50} (cfs)	
	Exist.	Prop.	Exist.	Prop.
1A / A	0.34	0.88	1.30	3.37
2A	0.27		1.03	
3A	0.27		1.03	
5B / B	0.88	0.88	3.37	3.36
TOTAL	1.76	1.76	6.73	6.73

With the proposed development, the peak flow rate for the overall site remains the same in the proposed condition, and therefore no detention is required.

4.0 Best Management Practices

Source and Treatment Control Best Management Practices (BMPs) are required for this project under the LA County Low Impact Development (LID).

4.1 Site Design BMPs

4.1.1 Minimize Stormwater Pollutants of Concern

The project site will minimize pollutants of concern by maximizing the reduction of pollutant loadings to the Maximum Extent Practicable. Pollutants of concern are addressed through a pre-treatment settlement device connected to the cistern within the project site as shown in the Low Impact Development Plan in Appendix 4.

4.1.2 Conserve Natural Areas

There are no natural areas to conserve on site.

4.2 Source Control BMPs

4.2.1 Protect Slopes and Channels

There are no slopes or channels on site.

4.2.2 Provide Storm Drain System Stenciling and Signage

Storm Drain System Stenciling and Signage will be provided at the proposed storm drain catch basins.

4.2.4. Properly Design Trash Storage Areas

Trash enclosures will be covered and walled inside of the building. Drainage from adjoining roofs and pavement will not enter the trash storage area. All trash container areas within the project will be covered and located at appropriate locations. The trash bin areas will not contain drains that connect directly to the storm drain system. The trash bins will be leak proof and have attached covers or lids.

4.3 Treatment Control BMPs

4.3.1 Mitigation Design (Volumetric or Flow based)

Volume-based or flow-based design standards may be used separately or in combination. Volume-based criteria are used in the sizing of detention or infiltration structures while flow-based criteria are used on swales, inlet

devices or wetlands. The LID requirements, approved by the Regional Water Quality Control Board, call for the treatment of the peak mitigation flow rate or volume of runoff produced by the 85th percentile rainfall event.

The LID calculation methodology was used to calculate the required treatment flows and volumes for each of the discharge points from the site. The runoff coefficient curve for Soil Type 013 and the LACDPW intensity-duration data and calculations are included in Appendix 3. The results are summarized in the table below.

Table 4: Peak Mitigation Flow and Volume Comparison Summary

Hotel and Residential:

			Treatment Required		Treatment Provided			
Sub-Area	**Area [ac]**	**Impervious [%]**	**Q_{PM} [cfs]**	**V_M [ft^3]**	**Area [ft^2]**	**Q_{WQ} [cfs]**	**V_{WQ} [ft^3]**	**Treatment Type**
A	0.88	93	0.34	2,942	x	x	3,024	Capture and Use
B	0.88	95	0.34	2,997			3,025	Capture and Use
Total	1.76	1.76	0.68	5,939		**Treatment Total**	6,049	

Office and Residential:

			Treatment Required		Treatment Provided			
Sub-Area	**Area [ac]**	**Impervious [%]**	**Q_{PM} [cfs]**	**V_M [ft^3]**	**Area [ft^2]**	**Q_{WQ} [cfs]**	**V_{WQ} [ft^3]**	**Treatment Type**
A	0.88	94	0.34	2,970	x	x	3,024	Capture and Use
B	0.88	95	0.34	2,997			3,025	Capture and Use
Total	1.76	1.76	0.68	5,967		**Treatment Total**	6,049	

The LID Site Plan is included in Appendix 4 and shows the sub-areas and proposed BMPs.

4.3.2 Capture and Use

Capture and use refers to a specific type of BMP that operates by capturing stormwater runoff and holding it for efficient use at a later time. On a commercial or industrial scale, capture and use BMPs are typically synonymous with cisterns, which can be implemented both above and below ground. Cisterns are sized to store a specific volume of water with no surface discharge until this volumes is exceeded. The primary use of captured runoff is for subsurface drip irrigation purposes. The on-site use of harvested water for non-potable domestic purposes conserves City-supplied potable water

and, where directed to unpaved surfaces, can recharge groundwater in local aquifers.

The LID Exhibits in Appendix 4 shows the location of the cistern used to treat the project site. The cistern is designed to detain the required mitigation volume and allow the overflow to discharge through a parkway drain. Per the Geotechnical Report by Byer Geotechnical dated 01/13/2016, groundwater was not encountered in the borings and CPT soundings to a maximum depth of 71.5 feet below existing grade. Based on a Seismic Hazard Zone Report 016, the California Geological Survey (CGS) has estimated the historically-highest groundwater level at the site was on the order of 35 feet below ground surface. Due to the historically higher groundwater elevation, infiltration is not feasible.

The cistern was sized by analyzing the proposed 85th percentile storm event volume using the standard LID calculation. The proposed cistern is to provide a treatment capacity of 6,049 cf, which is greater than the required peak mitigation volume of 5,967 cf. See *Appendix 3* for cistern capacity calculations.

5.0 Limitations

This report was prepared to comply with the guidelines established by the County of Los Angeles and their representatives. Evaluation of the appropriateness of these guidelines and the accuracy of the County data were beyond the scope of this work.

Usage of this report is limited to address the purpose and scope previously defined by the project owner. Psomas shall not be held responsible for any unauthorized application of this report and the contents therein.

The opinions represented in this report have been derived in accordance with current standards of civil engineering practice. No other warranty is expressed or implied.

6.0 References

City of Burbank Community Development Department Building Division, *Municipal Storm Water and Urban Runoff Discharges Manual* (August 2009)

Los Angeles County Department of Public Works, *LACDPW Hydrology/ Sedimentation Manual and Appendices* (1991, 1992, 1993, 2002)

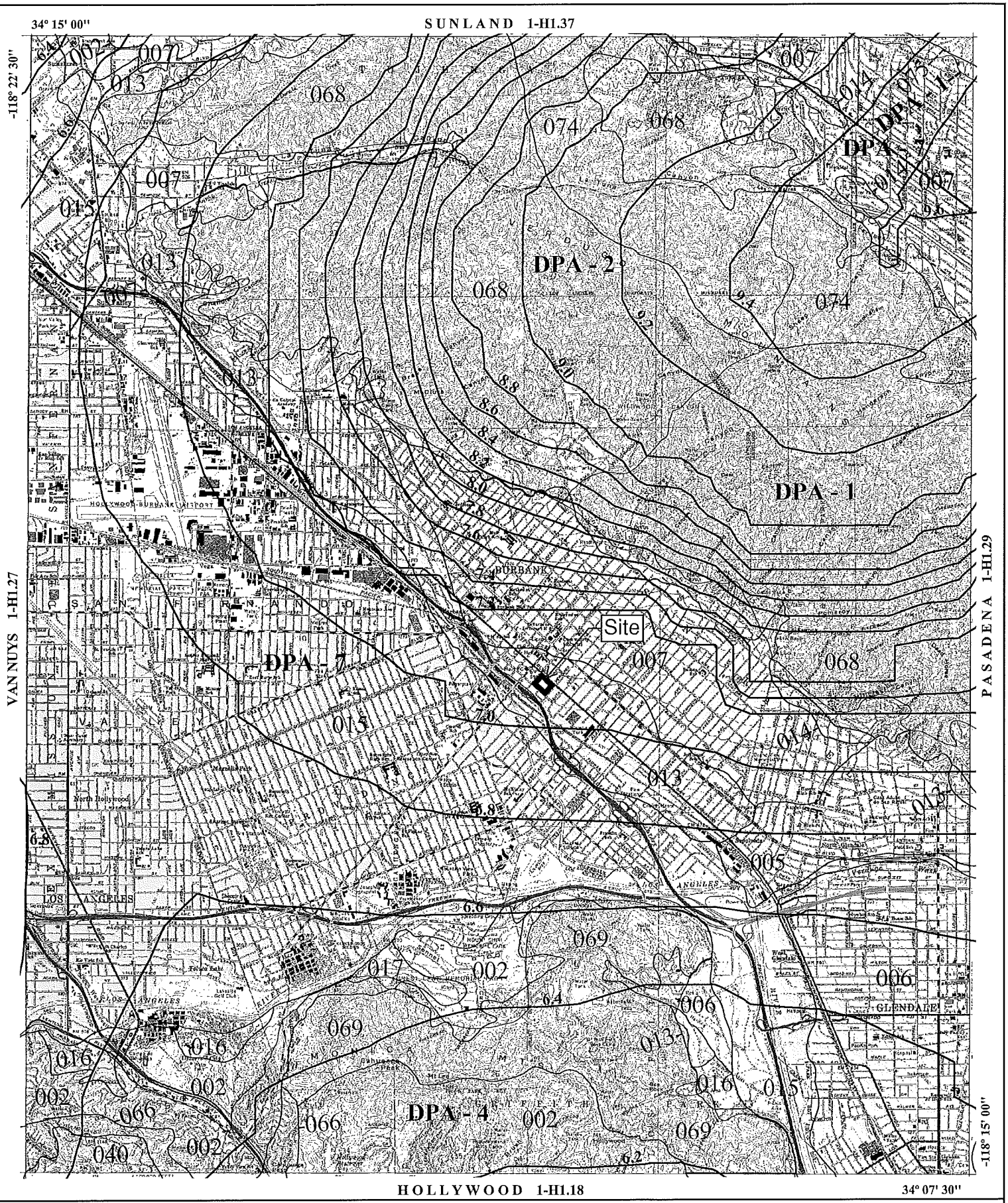
Los Angeles County Department of Public Works, *LACDPW HydroCalc* (August 2015)

Los Angeles County Department of Public Works, *Low Impact Development Standards Manual* (January 2009)

7.0 Appendices

Appendix 1 LACDPW Hydrology Data

Isohyet and Hydrologic Soil Classification Map



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

1 0 1 2 Miles

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

BURBANK
50-YEAR 24-HOUR ISOHYET

1-H1.28

LOS ANGELES COUNTY PUBLIC WORKS
Public Service That Works

$C_D = (0.9 * IMP) + (1.0 - IMP) * C_U$

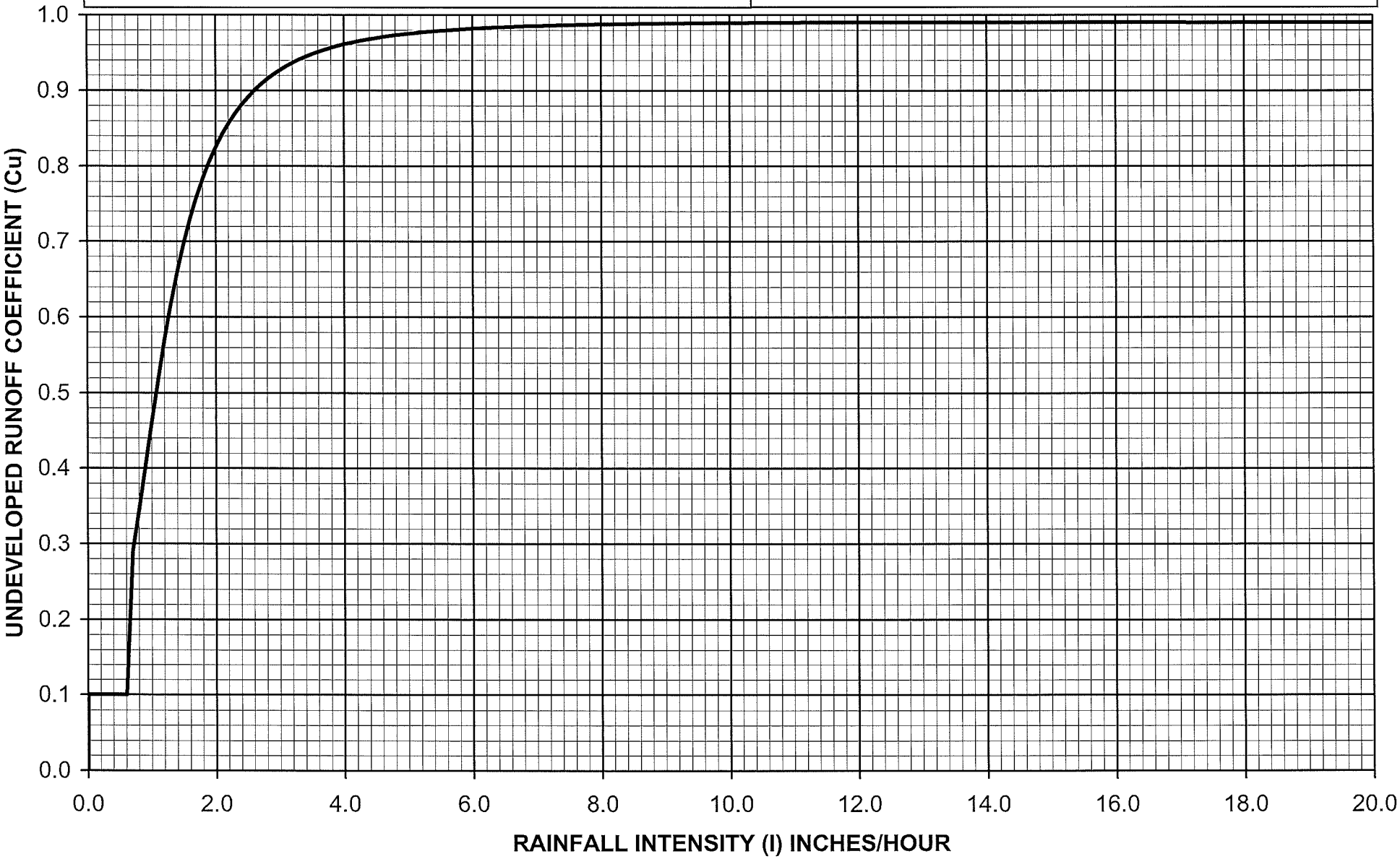
Where: C_D = Developed Runoff Coefficient

IMP = Proportion Impervious

C_U = Undeveloped runoff coefficient

Los Angeles County Department of Public Works

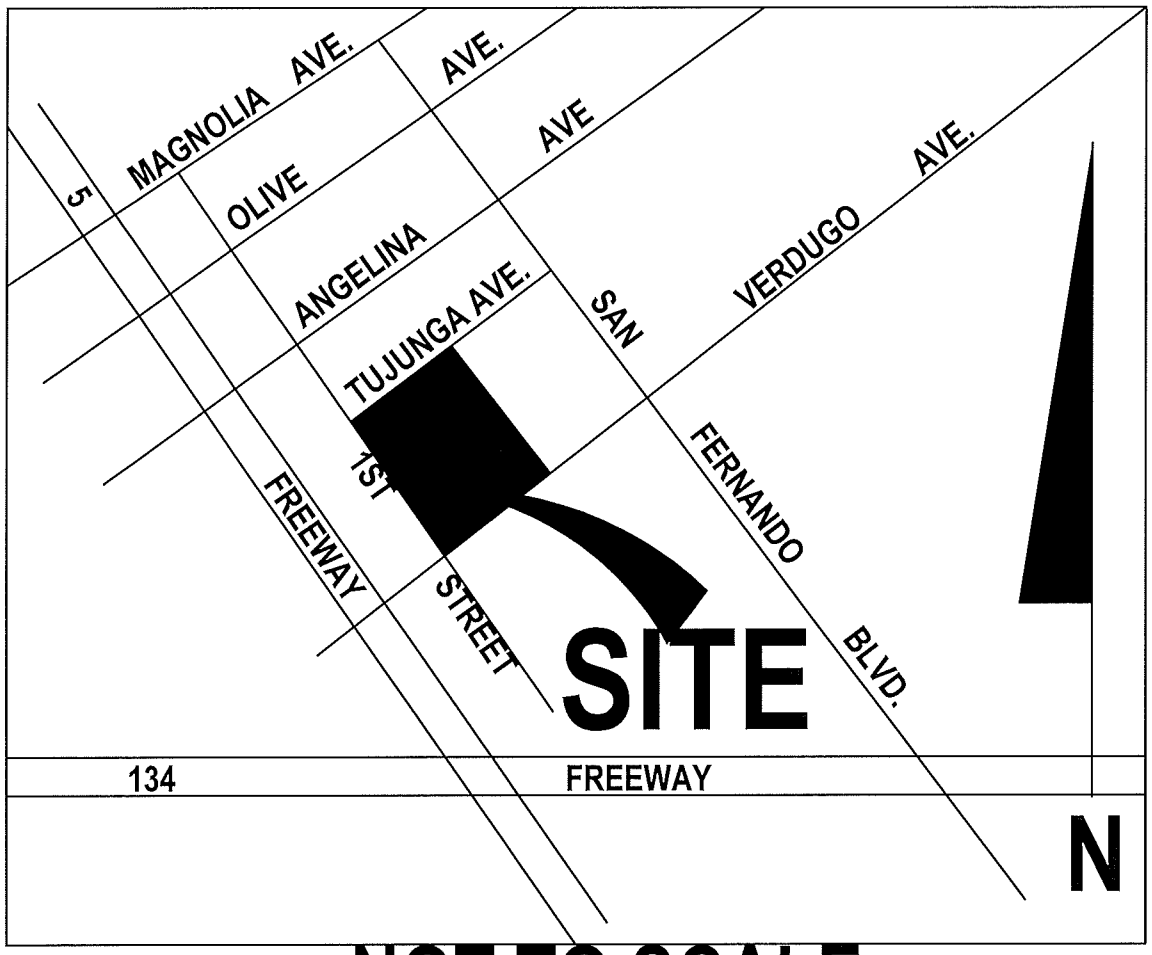
RUNOFF COEFFICIENT CURVE
SOIL TYPE NO. 013



Appendix 2 LID Project Site

Location and Vicinity Map

SITE MAP



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Appendix 3 Hydrology and LID Calculations

Peak Flow Hydrologic Analysis

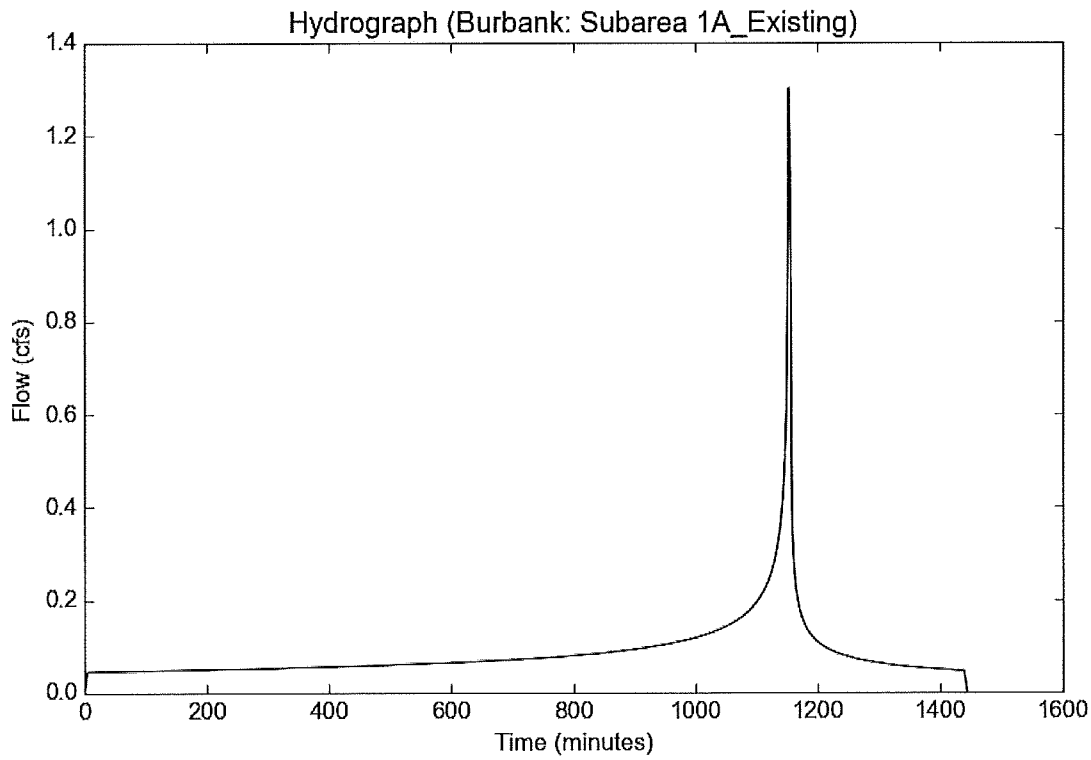
File location: W:/1CUC010100/ENGR/DOCS/LID - HYDROLOGY/Burbank - Subarea 1A_Existing.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Burbank
Subarea ID	Subarea 1A_Existing
Area (ac)	0.34
Flow Path Length (ft)	177.0
Flow Path Slope (vft/hft)	0.028
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9031
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.3006
Burned Peak Flow Rate (cfs)	1.3006
24-Hr Clear Runoff Volume (ac-ft)	0.1726
24-Hr Clear Runoff Volume (cu-ft)	7518.0965



Peak Flow Hydrologic Analysis

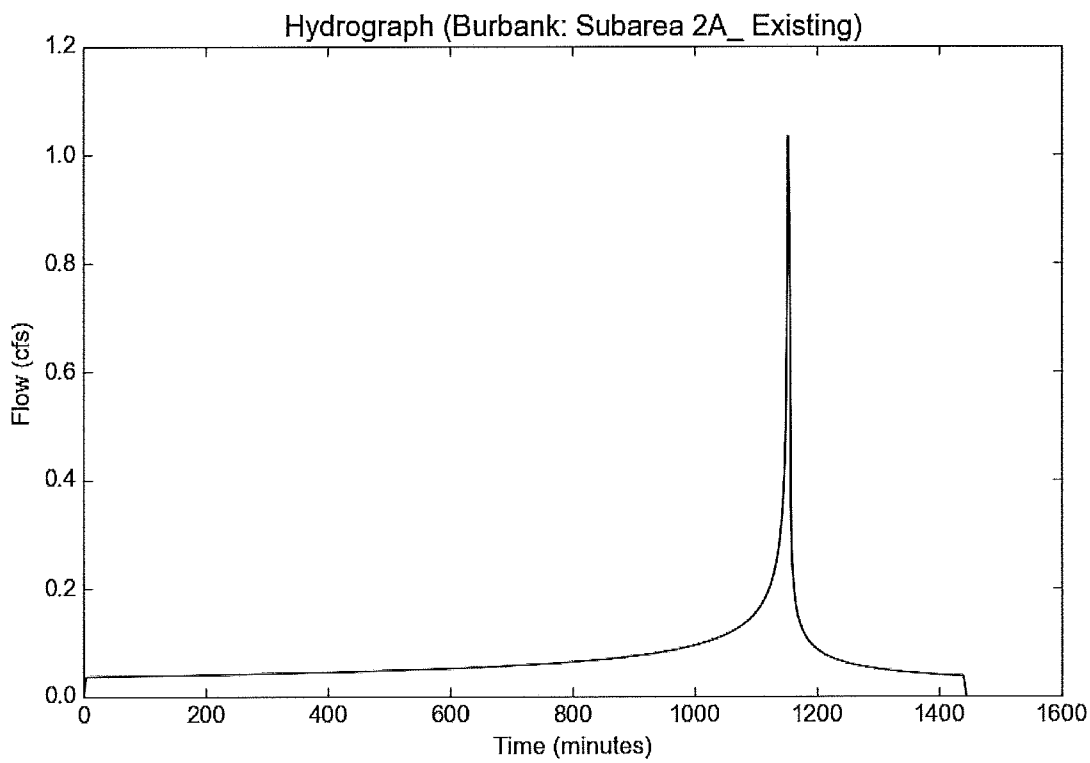
File location: W:/1CUC010100/ENGR/DOCS/LID - HYDROLOGY/Burbank - Subarea 2A_ExistingCondition.pdf
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Burbank
Subarea ID	Subarea 2A_ Existing
Area (ac)	0.27
Flow Path Length (ft)	165.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9031
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0329
Burned Peak Flow Rate (cfs)	1.0329
24-Hr Clear Runoff Volume (ac-ft)	0.1371
24-Hr Clear Runoff Volume (cu-ft)	5970.2531



Peak Flow Hydrologic Analysis

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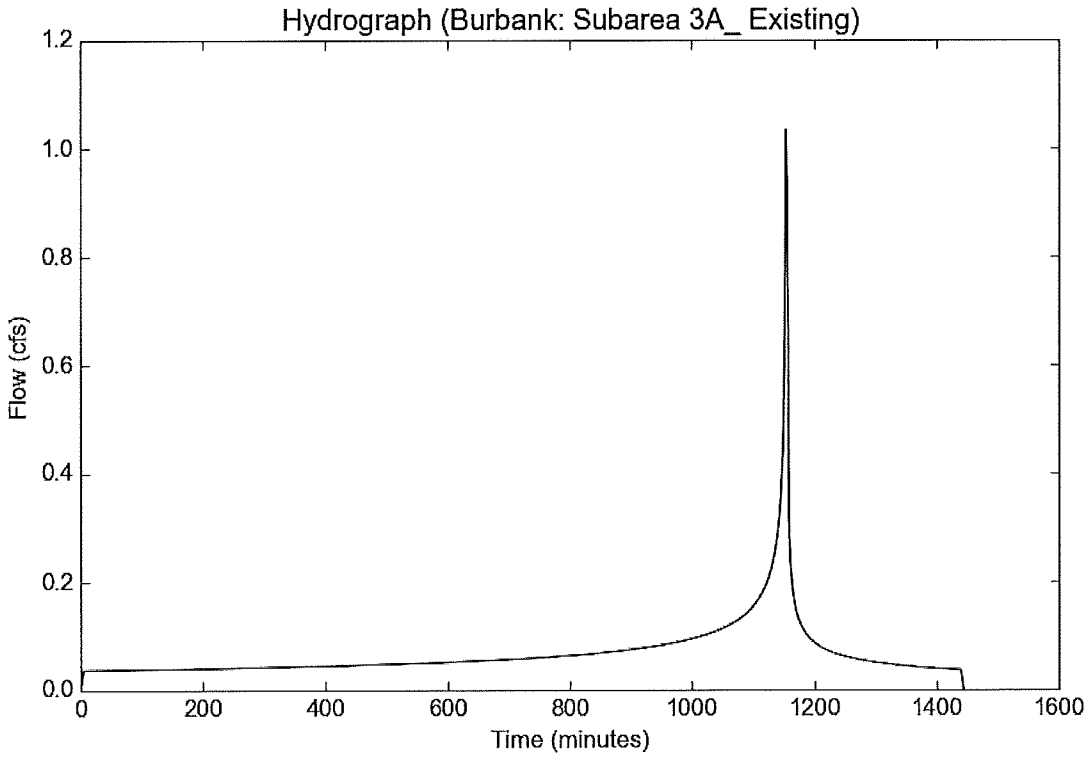
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Burbank
Subarea ID	Subarea 3A_ Existing
Area (ac)	0.27
Flow Path Length (ft)	165.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9031
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0329
Burned Peak Flow Rate (cfs)	1.0329
24-Hr Clear Runoff Volume (ac-ft)	0.1371
24-Hr Clear Runoff Volume (cu-ft)	5970.2531



Peak Flow Hydrologic Analysis

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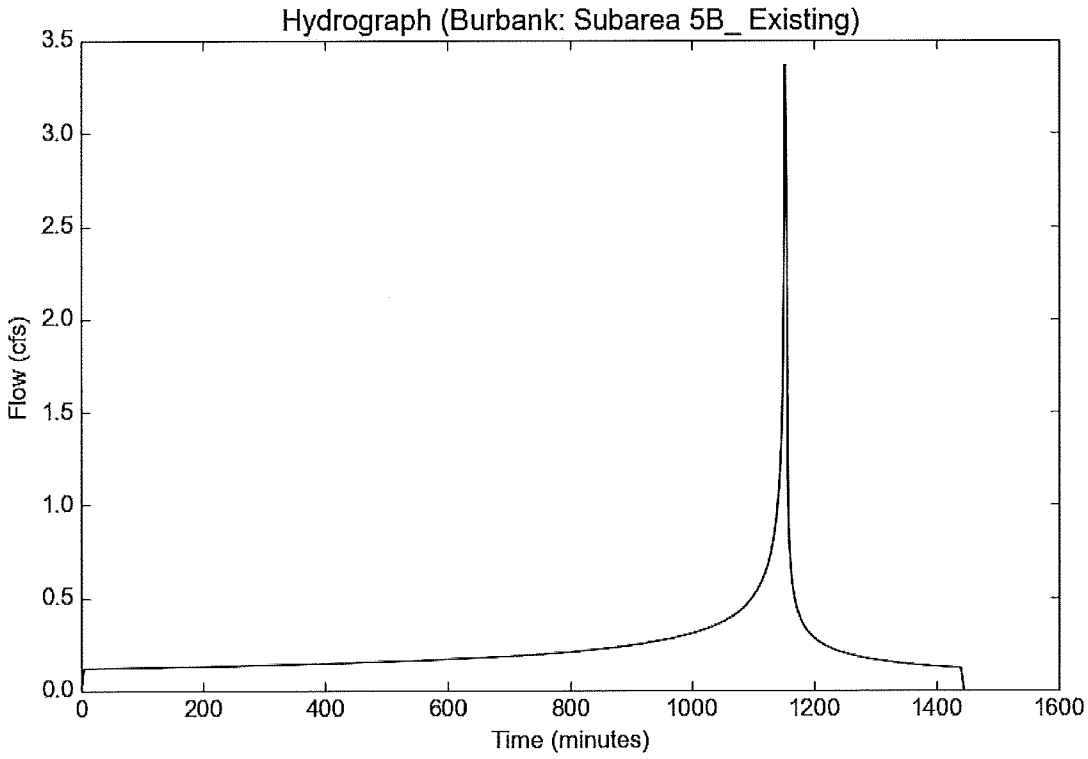
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	Burbank
Subarea ID	Subarea 5B_ Existing
Area (ac)	0.88
Flow Path Length (ft)	289.0
Flow Path Slope (vft/hft)	0.035
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9031
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.3664
Burned Peak Flow Rate (cfs)	3.3664
24-Hr Clear Runoff Volume (ac-ft)	0.4467
24-Hr Clear Runoff Volume (cu-ft)	19458.6028



Peak Flow Hydrologic Analysis

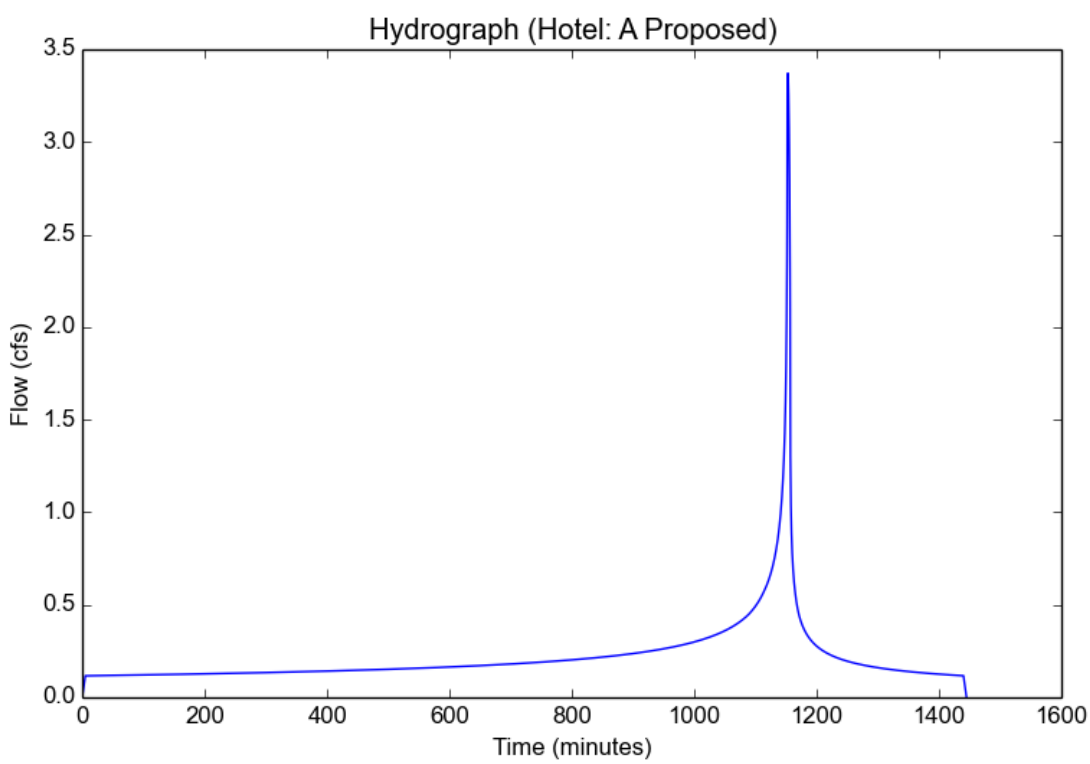
File location: W:/1CUC010100/ENGR/DOCS/LID - HYDROLOGY/16-0713 Hydrocalc/Proposed/Hotel A Proposed.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Hotel
Subarea ID	A Proposed
Area (ac)	0.88
Flow Path Length (ft)	291.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.93
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9043
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.3709
Burned Peak Flow Rate (cfs)	3.3709
24-Hr Clear Runoff Volume (ac-ft)	0.4395
24-Hr Clear Runoff Volume (cu-ft)	19144.6334



Peak Flow Hydrologic Analysis

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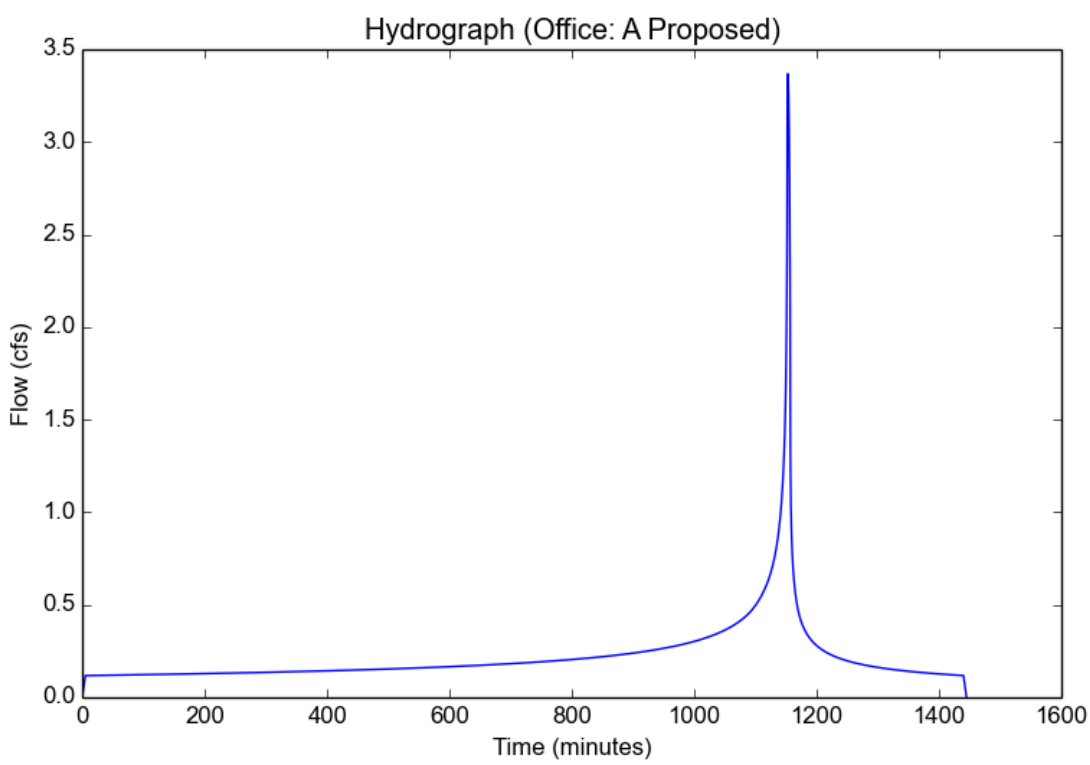
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Office
Subarea ID	A Proposed
Area (ac)	0.88
Flow Path Length (ft)	291.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.94
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9037
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.3686
Burned Peak Flow Rate (cfs)	3.3686
24-Hr Clear Runoff Volume (ac-ft)	0.4431
24-Hr Clear Runoff Volume (cu-ft)	19301.6181



Peak Flow Hydrologic Analysis

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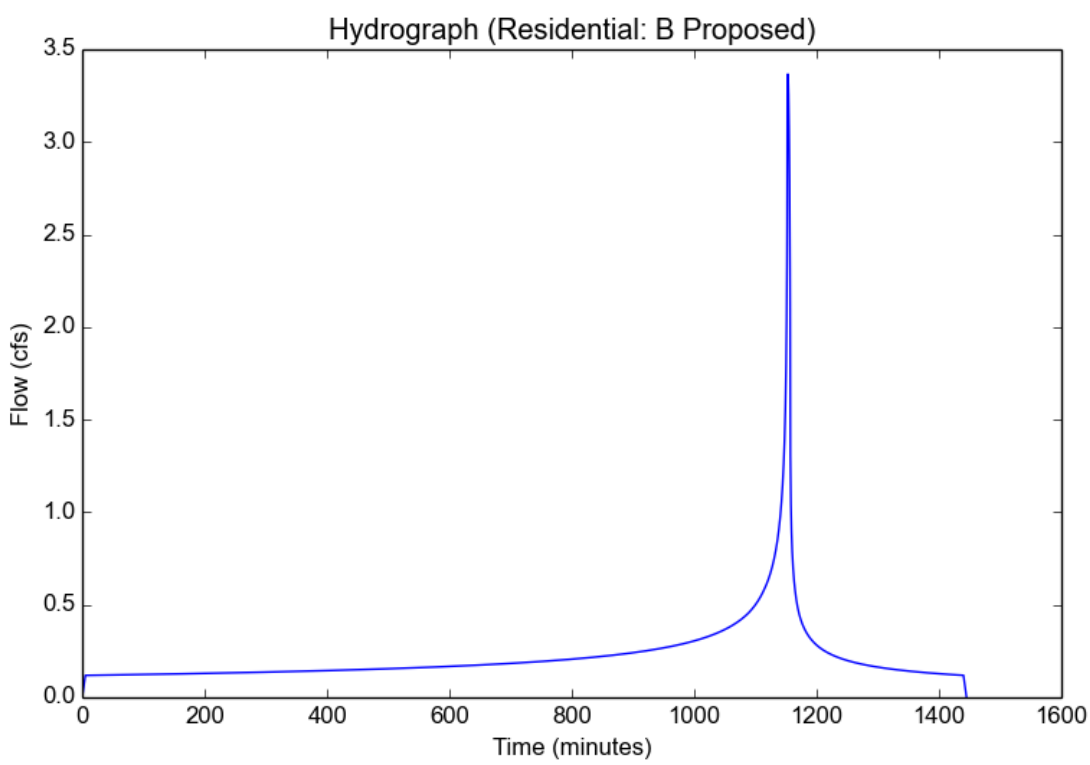
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Residential
Subarea ID	B Proposed
Area (ac)	0.88
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	7.1
Peak Intensity (in/hr)	4.2361
Undeveloped Runoff Coefficient (Cu)	0.9612
Developed Runoff Coefficient (Cd)	0.9031
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.3664
Burned Peak Flow Rate (cfs)	3.3664
24-Hr Clear Runoff Volume (ac-ft)	0.4467
24-Hr Clear Runoff Volume (cu-ft)	19458.6028



Peak Flow Hydrologic Analysis

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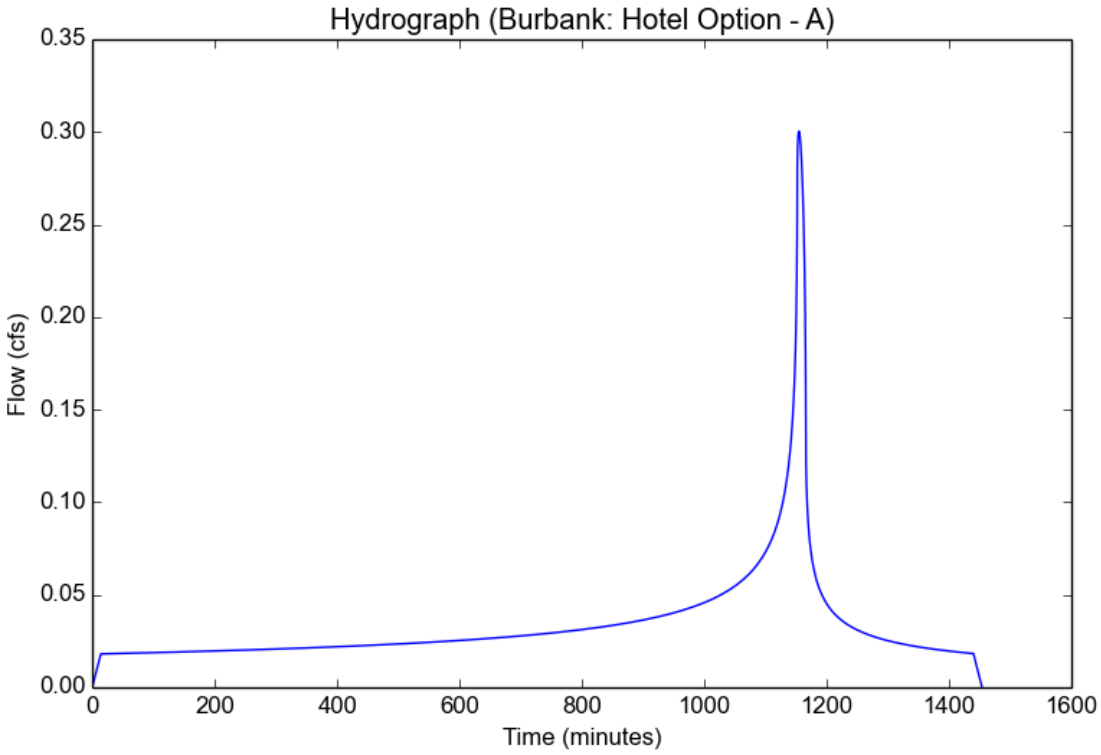
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Burbank
Subarea ID	Hotel Option - A
Area (ac)	0.88
Flow Path Length (ft)	291.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.93
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.4045
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.844
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	0.3004
Burned Peak Flow Rate (cfs)	0.3004
24-Hr Clear Runoff Volume (ac-ft)	0.0675
24-Hr Clear Runoff Volume (cu-ft)	2941.1785



Peak Flow Hydrologic Analysis

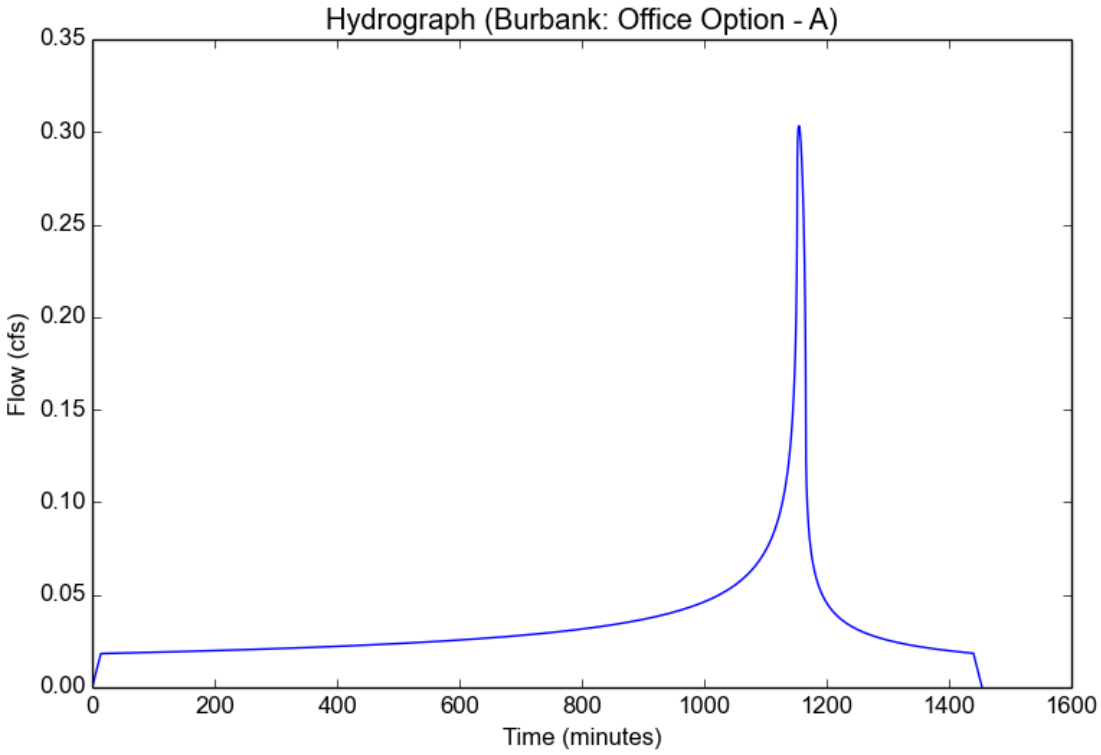
File location: W:/1CUC010100/ENGR/DOCS/LID - HYDROLOGY/16-0713 Hydrocalc/Office/Burbank - Office Option - A.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Burbank
Subarea ID	Office Option - A
Area (ac)	0.88
Flow Path Length (ft)	291.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.94
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.4045
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.852
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	0.3033
Burned Peak Flow Rate (cfs)	0.3033
24-Hr Clear Runoff Volume (ac-ft)	0.0682
24-Hr Clear Runoff Volume (cu-ft)	2969.0569



Peak Flow Hydrologic Analysis

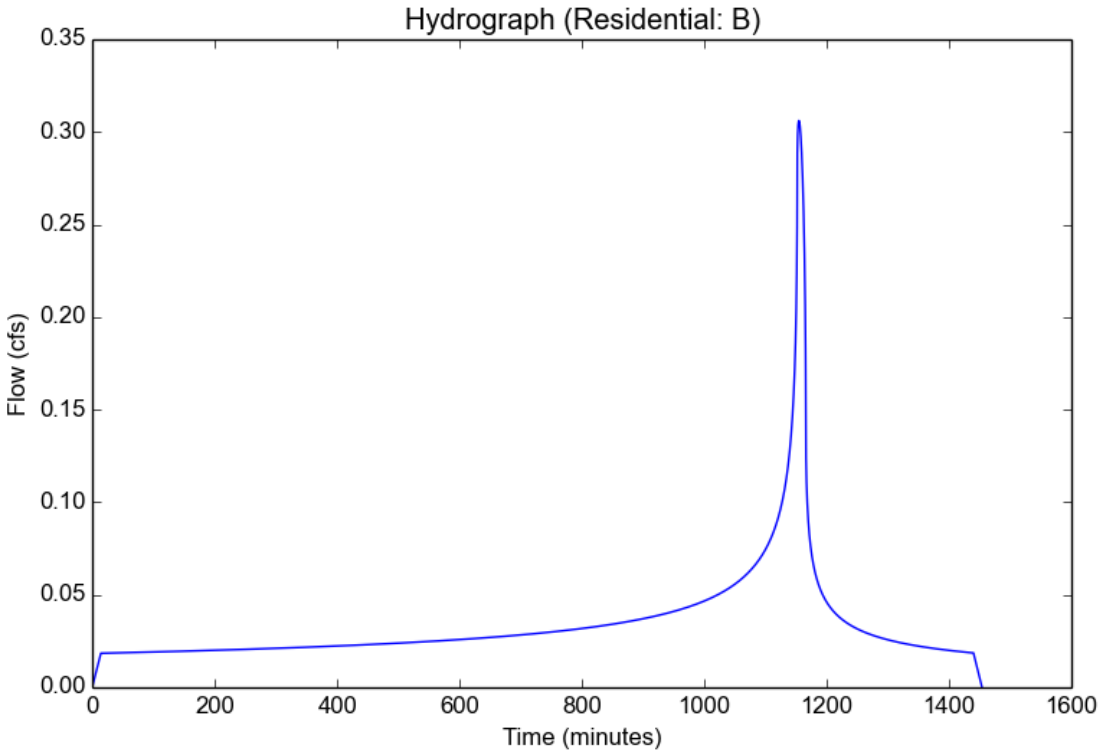
File location: W:/1CUC010100/ENGR/DOCS/LID - HYDROLOGY/16-0713 Hydrocalc/Residential/Residential - B.pdf
Version: HydroCalc 0.3.1

Input Parameters

Project Name	Residential
Subarea ID	B
Area (ac)	0.88
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.95
Soil Type	13
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

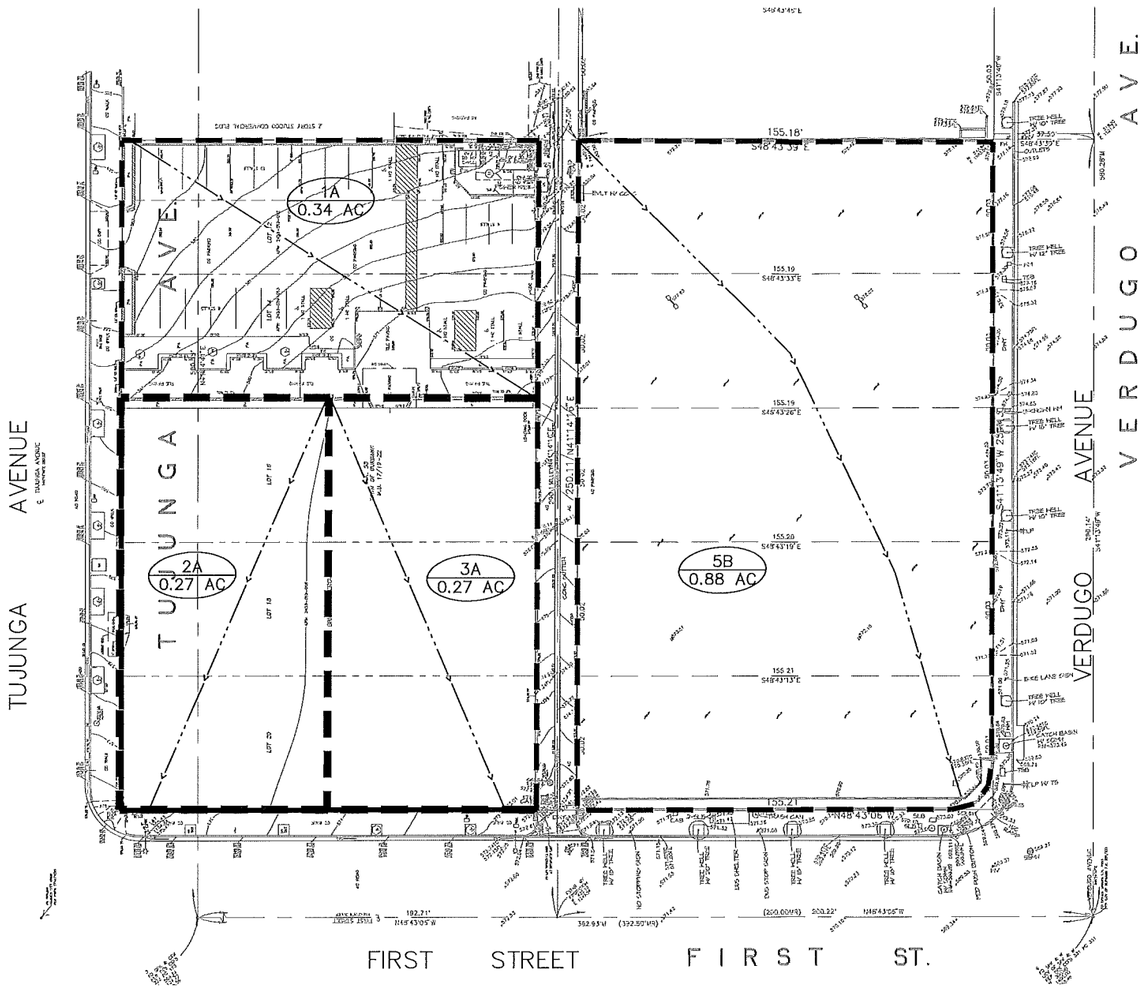
Output Results

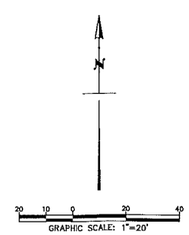
Modeled (85th percentile storm) Rainfall Depth (in)	1.1
Peak Intensity (in/hr)	0.4045
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.86
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	0.3061
Burned Peak Flow Rate (cfs)	0.3061
24-Hr Clear Runoff Volume (ac-ft)	0.0688
24-Hr Clear Runoff Volume (cu-ft)	2996.9354



Appendix 4 Site Plans

Existing Condition
Proposed Condition
LID Site Plan





LEGEND:

- PROPERTY LINE
- TC FLOW PATH
- DRAINAGE SUB-AREA BOUNDARY
- 1A / 0.34 AC — SUB-AREA DESIGNATION AND ACREAGE

HYDROLOGY INFORMATION:

25-YEAR 24-HOUR ISOHYET:

LACDPW SOIL CLASSIFICATION:

REGISTERED PROFESSIONAL ENGINEER — CHRISTOPHER REED — No. C71513 — CIVIL — STATE OF CALIFORNIA — SEAL

DESIGNED	CR
DRAFTED	CR
CHECKED	

REV	DATE	DESCRIPTION	BY	APP'D

BENCHMARK

ELEV. _____ ADJUSTMENT _____

PSOMAS

555 South Flower Street, Suite 4400
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 fax
www.psomas.com

PREMIER ON FIRST

EXISTING HYDROLOGY EXHIBIT

100 E. TUJUNGA AVE. BURBANK, CA 91502

DATE:	APRIL 21, 2016
SCALE:	1" = 20'
PROJECT NUMBER:	1CUC010100
SHEET	_____ OF _____

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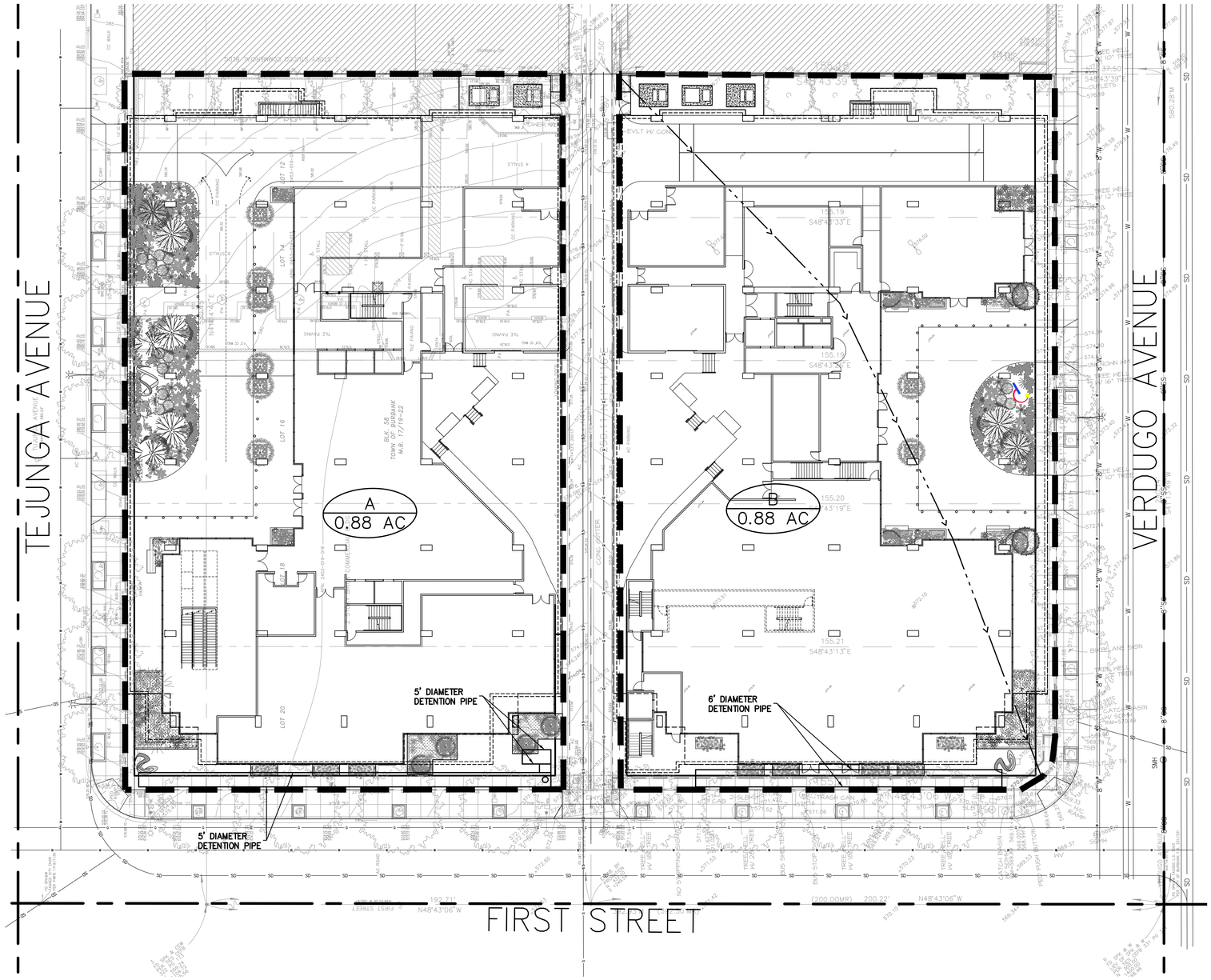

PROPOSED CONDITIONS:

SUB-AREA ID	SUB-AREA (ACRES)	IMPERVIOUS AREA (ACRES)	PERCENT IMPERVIOUS	V_M [FT^3]	DETENTION [FT^3]
A	0.88	0.06	93%	2,942	3,024
B	0.88	0.04	95%	2,997	3,025

LEGEND:

PROPERTY LINE

TC FLOW PATH

DRAINAGE SUB-AREA BOUNDARY

X / X.XX AC — SUB-AREA DESIGNATION AND ACREAGE

20 10 0 20 40

GRAPHIC SCALE: 1"=20'

REGISTERED PROFESSIONAL ENGINEER — IAN CREITU — No. C71513 — CIVIL — STATE OF CALIFORNIA

DESIGNED	IC
DRAFTED	CR
CHECKED	IC

REV	DATE	DESCRIPTION	BY	APP'D

BENCHMARK

CITY OF BURBANK BENCH MARK NO. 1 ELEV=628.889 (SUPERSEDED BM# CITY HALL SEAL)

DESCRIPTION: 2-1/2" BRASS CAP STAMPED "CITY OF BURBANK BENCH MARK NO.1" SET IN CONCRETE PATIO ON THE SOUTHEAST SIDE OF CITY HALL, 16.2 FEET NORTHEAST OF THE CENTERLINE OF THE STEPS AND 2 FEET IN FRONT OF THE WALL WITH THE BRONZE PLAQUE. ALSO 6.2 FEET SOUTHWEST OF THE DIAMOND JUBILEE TIME CAPSULE AND 61 FEET NORTHWEST OF THE NORTHWEST CURB OF OLIVE AVENUE.

ELEV. 628.889 ADJUSTMENT

PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 fax
www.psomas.com

PREMIER ON FIRST
100 EAST TUJUNGA AVENUE AND 103-137 EAST VERDUGO AVENUE
PROPOSED HYDROLOGY EXHIBIT
HOTEL OPTION

DATE: 04/12/2016

SCALE: 1:20

PROJECT NUMBER: 1CUC010100

SHEET 1 OF 2

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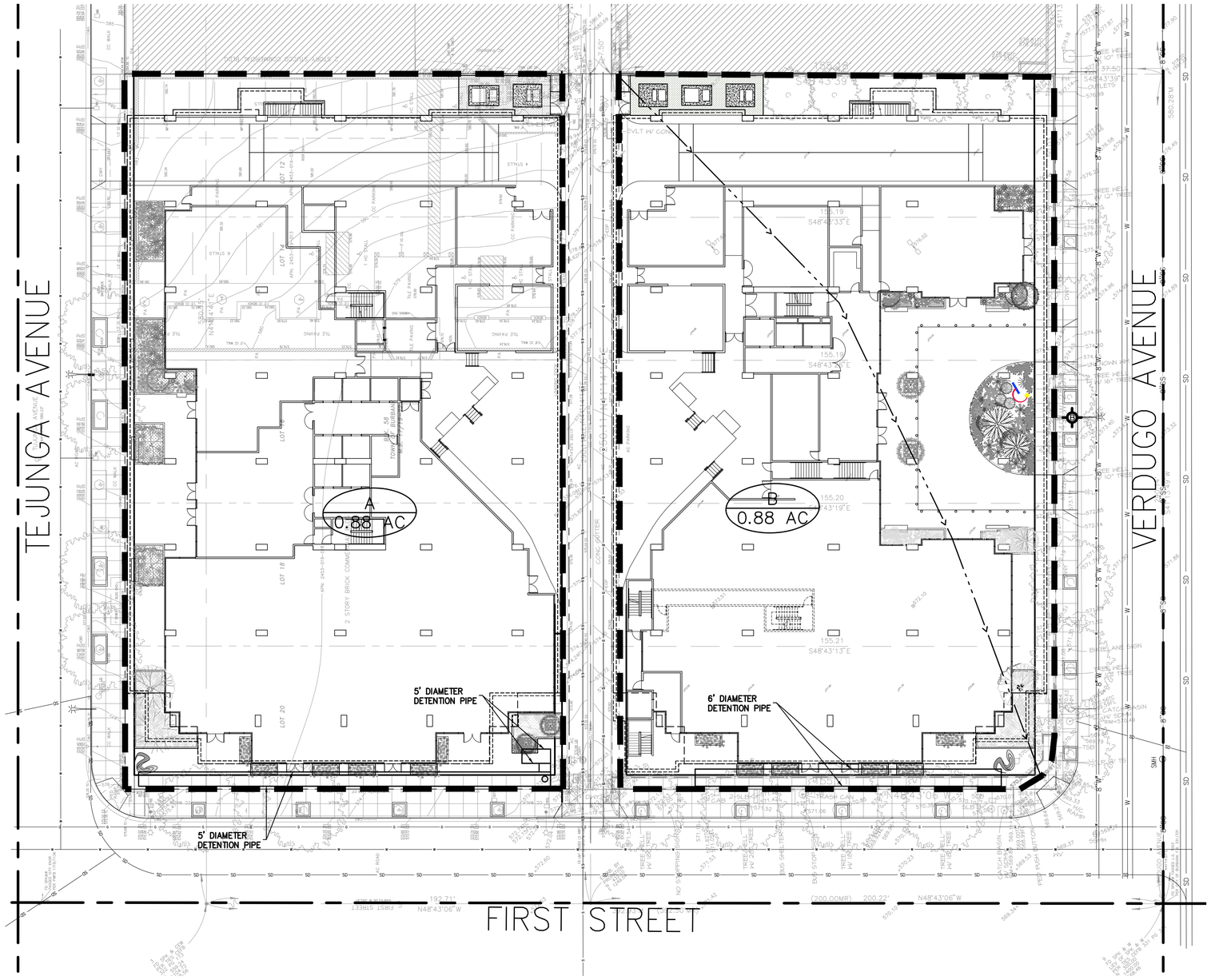

PROPOSED CONDITIONS:

SUB-AREA ID	SUB-AREA (ACRES)	IMPERVIOUS AREA (ACRES)	PERCENT IMPERVIOUS	V_M [FT^3]	DETENTION [FT^3]
A	0.88	0.05	94%	2,970	3,024
B	0.88	0.04	95%	2,997	3,025

LEGEND:

PROPERTY LINE

TC FLOW PATH

DRAINAGE SUB-AREA BOUNDARY

X / X.XX AC — SUB-AREA DESIGNATION AND ACREAGE

20 10 0 20 40

GRAPHIC SCALE: 1"=20'

REGISTERED PROFESSIONAL ENGINEER — TON CRETU — No. C71513 — CIVIL — STATE OF CALIFORNIA

DESIGNED	IC
DRAFTED	CR
CHECKED	IC

REV	DATE	DESCRIPTION	BY	APP'D

BENCHMARK

CITY OF BURBANK BENCH MARK NO. 1 ELEV=628.889 (SUPERSEDED BM# CITY HALL SEAL)

DESCRIPTION: 2-1/2" BRASS CAP STAMPED "CITY OF BURBANK BENCH MARK NO.1" SET IN CONCRETE PATIO ON THE SOUTHEAST SIDE OF CITY HALL, 16.2 FEET NORTHEAST OF THE CENTERLINE OF THE STEPS AND 2 FEET IN FRONT OF THE WALL WITH THE BRONZE PLAQUE. ALSO 6.2 FEET SOUTHWEST OF THE DIAMOND JUBILEE TIME CAPSULE AND 61 FEET NORTHWEST OF THE NORTHWEST CURB OF OLIVE AVENUE.

ELEV. 628.889 ADJUSTMENT

PSOMAS
555 South Flower Street, Suite 4400
Los Angeles, CA 90071
(213) 223-1400 (213) 223-1444 fax
www.psomas.com

PREMIER ON FIRST
100 EAST TUJUNGA AVENUE AND 103-137 EAST VERDUGO AVENUE
PROPOSED HYDROLOGY EXHIBIT
OFFICE OPTION

DATE: 04/12/2016

SCALE: 1:20

PROJECT NUMBER: 1CUC010100

SHEET 2 OF 2

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