Appendix H
Hydrology Study

Preliminary Hydrology Study

for

Fairview Affordable Housing

2321 – 2335 N. Fairview Street

Burbank, CA 90059

KPFF Job #: 2300102

November 2024

PREPARED BY:

KPFF CONSULTING ENGINEERS

700 S. Flower St., Suite 2100

Los Angeles, California 90017

(213) 418-0201

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Hydrology Study

A. Introduction

1.1 Purpose & Scope

The following Hydrology Study has been prepared for the development of the Fairview Affordable Housing site located in an incorporated area within the County of Los Angeles, to satisfy the Los Angeles County Department of Public Works Hydrology requirements.

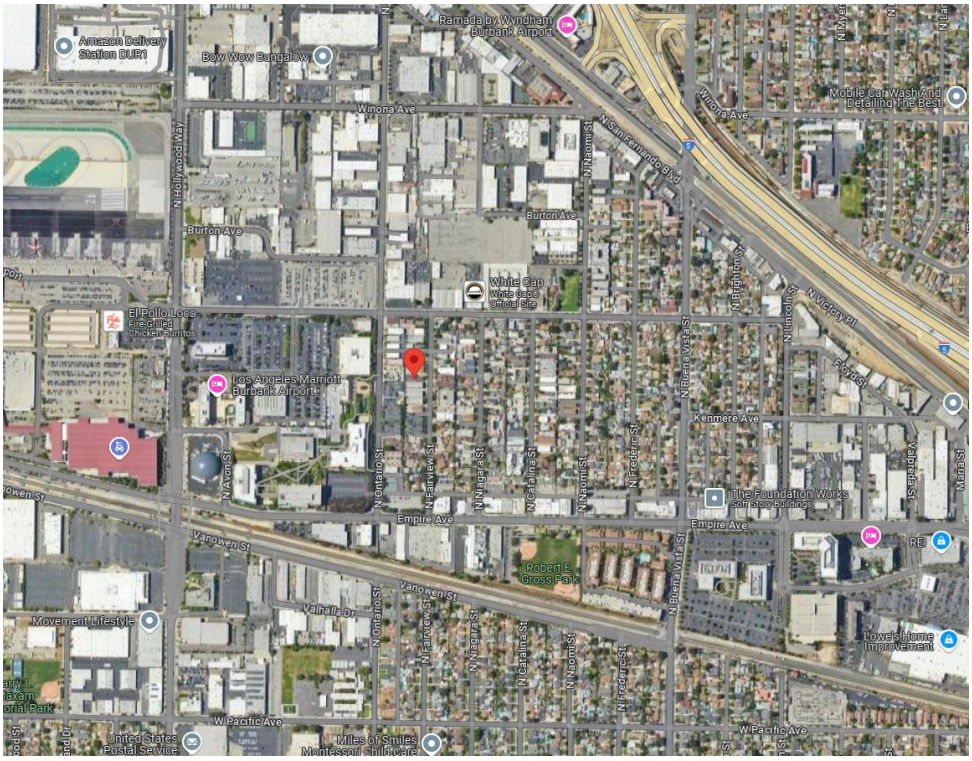
The scope of the study includes the following:

- Identification of existing conditions on-site drainage areas and calculation of peak flow rates and runoff volumes for these areas.
- Identification of proposed on-site hydrologic conditions & site/drainage plan.
- Identification of floodplain(s) impacting the site.
- Identification of Water Quality/LID Best Management Practices (BMPs) proposed for the project.
- Summary of Findings & Conclusion

1.2 Project Overview

Existing Condition

The proposed site is located within the city of Burbank in the County of Los Angeles. The proposed site encompasses 0.62 acres and is bounded by North Fairview Street to the east, and apartment buildings to the north, west, and south. Refer to the project's vicinity map and location map.



Vicinity Map

Location Map

The site is currently developed with one two-story apartment building, one one-story apartment building, three single family homes, and three concrete surface parking lots which can all be accessed from North Fairview Street.

Proposed Condition

According to the entitlement set provided by T&M Architects dated August 13th, 2024, the proposed site will be comprised of a subterranean parking level and 3 and 4 story apartments above grade.

1.3 Reference

- Los Angeles County Department of Public Works Hydrology Manual, January 2006.
- Los Angeles County Department of Public Works Department 2014 Low Impact Development Standard Manual

B. Methodology

1.1 General Methodology

The requirements and recommendations found in the Los Angeles County Hydrology Manual (January 2006) provided by the Los Angeles County Department of Public Works were used as the basis for the methodology and calculations found in this study. Calculations were performed for the 25-year, 24-hour storm using HydroCalc software provided by the County.

1.2 Source of Topography

For the existing condition on-site area, elevations were generated from a field survey provided by KPFF Consulting Engineers. For the developed conditions on-site areas, the general topography was designed by KPFF Consulting Engineers.

1.3 Soil Classifications & Rainfall Intensity Values

The project site is located on the Los Angeles County Hydrologic Map 1-H1.28. The map shows the site to be in Soil Classification Area 015, with a 50-year 24-hour isohyet of 7.1 inches. A copy of Map 1-H1.28 is included in Exhibit A.

For the purposes of this study, “non-burned” soils conditions have been considered for on-site areas to calculate peak flow rate calculations. Since the site and surrounding properties are developed, a Fire Factor of 0.00 has been applied per the County Hydrology Manual requirements for Time of Concentration (TC) calculations.

1.4 Time of Concentration (TC) Calculations

Time of concentration for both existing and proposed conditions were calculated using the Hydrocalc software provided by the County. Refer to Attachments 1 & 2 for existing and proposed 25-year 24-hour Hydrocalc results.

C. Existing Conditions Hydrology Calculations and Summary

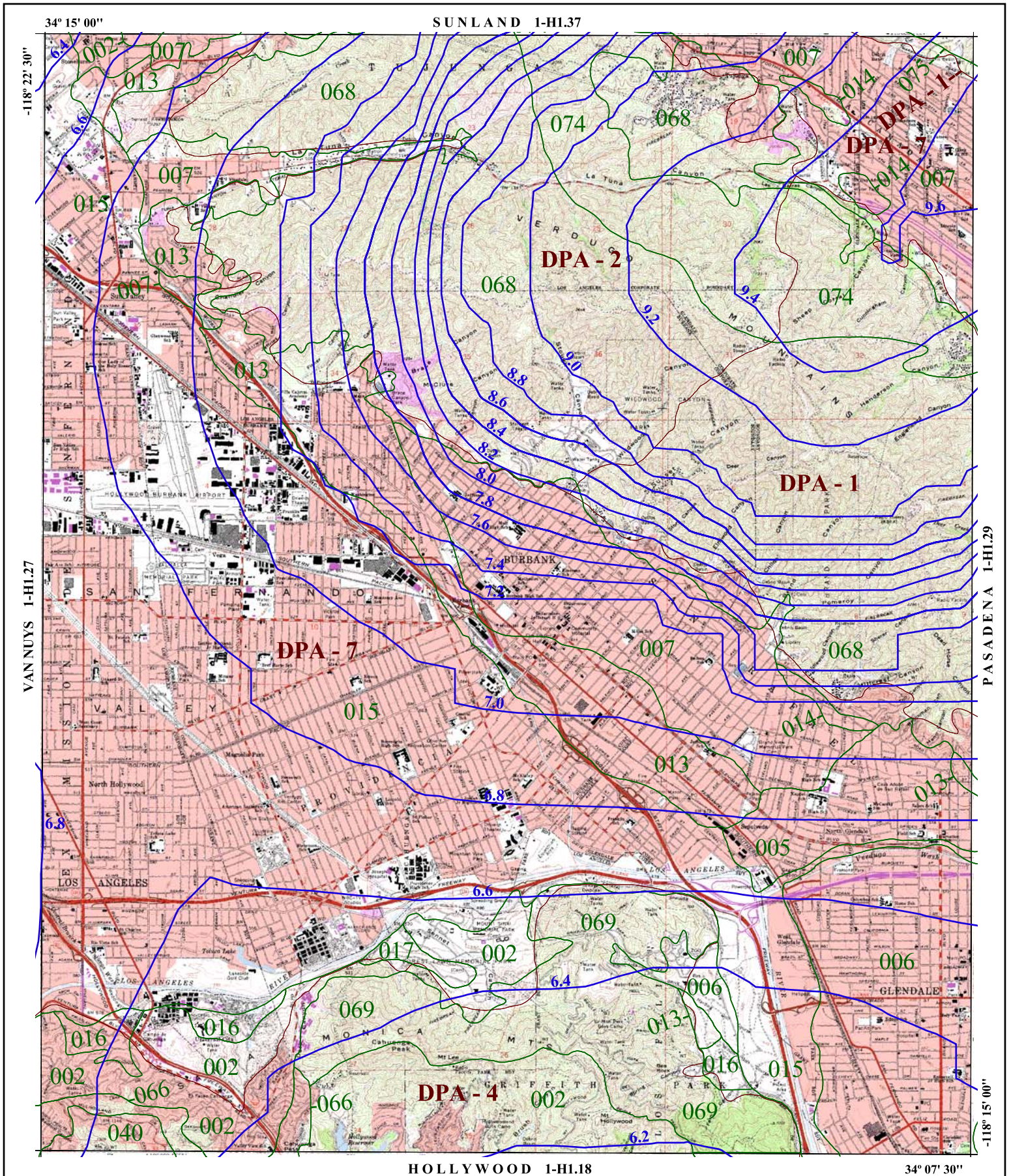
Exhibit B Existing Pre-Development Hydrologic Conditions Study Map illustrates the existing condition of the site. 6,424 square feet (0.15 acres) of the site is comprised of pervious landscape. 20,782 square feet (0.47 acres) of the site is comprised of impervious hardscape and existing buildings. 76% of the existing site is impervious. According to the hydrocalc shown in Attachment 1, the peak runoff flow rate is 1.84 cubic feet per second, and the 24-hour runoff volume is 9,925 cubic feet. The entire site appears to drain to the east towards Fairview Street.

D. Proposed Conditions Hydrology Calculations and Summary

Exhibit C Proposed Post-Development Hydrologic Conditions Study Map illustrates the existing condition of the site. 3,834 square feet (0.09 acres) of the site will be comprised of pervious landscape. 23,296 square feet (0.53 acres) of the site will be comprised of impervious hardscape and proposed apartment buildings. 86% of the proposed site is impervious. According to the hydrocalc shown in Attachment 2, the post development runoff flow rate is 1.94 cubic feet per second, and the 24-hour runoff volume is 11,007 cubic feet. The proposed condition will increase the imperviousness of the site by 10%, which has increased the post development flowrate by 0.10 cubic feet per second and 24-hour runoff

volume by 1,082 cubic feet, meaning that 1,082 cubic feet of storage volume must be provided in order to maintain the pre-development hydrological conditions. According to the Geotechnical Engineering Investigation prepared by Geotechnologies, Inc, the site soils are suitable for deep infiltration, and a drywell system is feasible, see Attachment 5. For Low Impact Development (LID) compliance, we are proposing a Maxwell Plus system which consists of a 6' diameter drywell and a pre-treatment unit which are sized to treat the 85th percentile storm event runoff volume. The 85th percentile storm event runoff treatment volume owed for the proposed site is 1,935 cubic feet, see Attachment 4 for proposed condition 85th percentile hydrocalc. The Maxwell Plus system will be sized to infiltrate the required volume. By infiltrating and storing 1,935 cubic feet of runoff within the first three hours of a storm event, we will exceed the 1,082 cubic feet of storage needed to maintain the hydrologic condition resulting in a net reduction of stormwater runoff. Flows exceeding the 85th percentile storm event would be conveyed through an overflow drain that discharges to Fairview Street, see Exhibit B for Proposed Post-Development Hydrologic Conditions Study Map.

Exhibit A:
Los Angeles County
Soil/Rainfall/DPA Zone Map



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

B U R B A N K

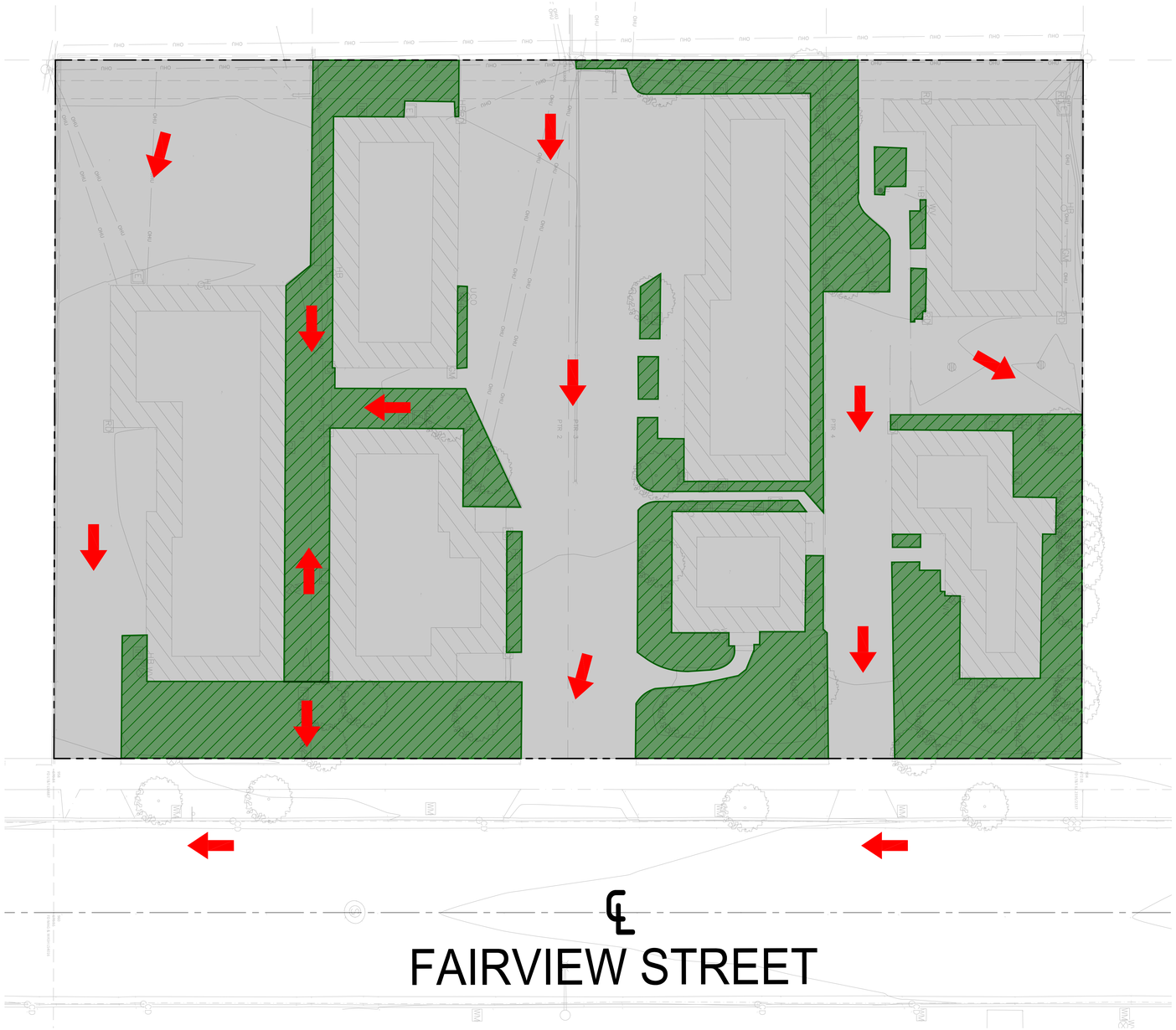
50-YEAR 24-HOUR ISOHYET

1-H1.28

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

Exhibit B:
Existing Pre-Development Hydrologic Conditions Study Map

Existing Pre-Development Hydrologic Conditions Study Map



GENERAL DEMOLITION NOTES:

1. CONTRACTOR TO CLEAR PROJECT SITE AREA WITHIN THE CONFINES OF THE DEMOLITION LIMIT LINE. THE CONTRACTOR SHALL DEMOLISH AND REMOVE FROM THE SITE ALL EXISTING UTILITIES, STRUCTURES, PLANTERS, TREES, AND ALL OTHER SITE FEATURES, UNLESS OTHERWISE NOTED ON THE PLAN.
2. REMOVAL OF LANDSCAPING SHALL INCLUDE ROOTS AND ORGANIC MATERIALS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS AND SHALL PAY ALL FEES NECESSARY FOR ENCROACHMENT, GRADING, DEMOLITION AND DISPOSAL OF SAID MATERIALS AS REQUIRED BY PRIVATE, LOCAL AND STATE JURISDICTIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A SITE INSPECTION TO FULLY ACKNOWLEDGE THE EXTENT OF THE DEMOLITION WORK.
5. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING ABOVE AND UNDERGROUND UTILITIES. LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE SHOWN FOR GENERAL INFORMATION ONLY.
6. DAMAGE TO ANY EXISTING UTILITIES AND SERVICES TO REMAIN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL REPAIR AND/OR REPLACE IN KIND.
7. EROSION CONTROL MEASURES SHALL BE IMPLEMENTED TO PREVENT DEBRIS AND UNSUITABLE MATERIALS FROM ENTERING STORM DRAINS, SANITARY SEWERS AND STREETS.
8. DUST CONTROL SHALL BE IMPLEMENTED DURING DEMOLITION.
9. DEMOLITION IS LIMITED TO WITHIN DEMOLITION LIMIT LINE UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL VERIFY THE LOCATION AND QUANTITY OF EXISTING SURFACE STRUCTURES AND SHALL BE SOLELY RESPONSIBLE FOR ANY UNIDENTIFIED UTILITIES, IMPROVEMENTS, TREES, ETC. TO BE DEMOLISHED AND REMOVED WITHIN THE DEMOLITION LIMIT LINE, INCLUDING APPURTENANT FOUNDATIONS OR SUPPORTS.
11. DEMOLITION CALLOUTS IN THIS SECTION ARE REPRESENTATIVE OF WHAT IS TO BE DONE, NOT AN ITEMIZED ACCOUNTING FOR EACH PIPE, CATCH BASIN, MANHOLE, VAULT, ETC. THAT IS TO BE DEMOLISHED, REMOVED AND DISPOSED OF.

Existing Condition

SITE INFORMATION

SOIL TYPE: 15

50 YEAR: 7.1"

TOTAL AREA: 27,206 sf ---> 0.62 acre

PERVIOUS AREA: 6,424 sf ---> 0.15 acre

IMPERVIOUS AREA: 20,782 sf ---> 0.47 acre

%IMPERVIOUS: 76%

N

0 5' 10'

SCALE: 1"=10'

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Y&M Architects

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Tel. 213 623 2107 Fax. 213 623 2108
www.ymarch.com

THE VILLAGE AT FAIRVIEW

Project. 2321 - 2335 N.FAIRVIEW ST., BURBANK CA 91504

HOMES & HOPE - BURBANK HOUSING CORPORATION

Developer.

01.01.24

Date

C1.20

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Exhibit C:
Proposed Post-Development Hydrologic Conditions Study Map

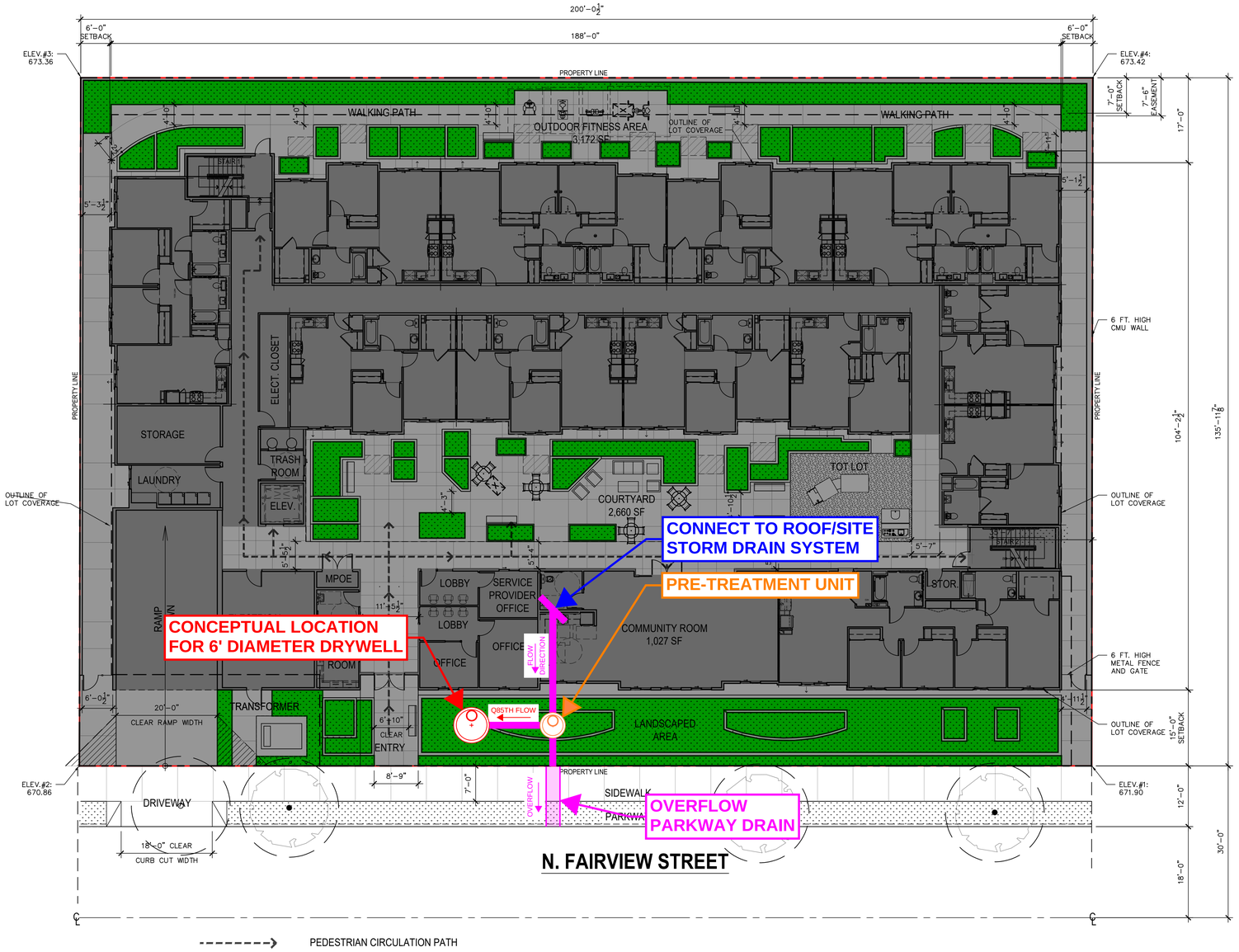
Proposed Post-Development Hydrologic Conditions Study Map

Low Impact Development: Drywell

Proposed Condition

SITE INFORMATION
SOIL TYPE: 15
50 YEAR: 7.1"
85TH: 1.1"

TOTAL AREA: 27,206 sf ---> 0.62 acre
PERVIOUS AREA: 3,834 sf ---> 0.09 acre
IMPERVIOUS AREA: 23,296 sf ---> 0.53 acre
%IMPERVIOUS: 86%



NORTH

SITE PLAN
SCALE: 1" = 10'-0"

Low Impact Development | Drywell Calculations

Catchment Area = (0.9 x Impervious Area [sf])+(0.1 x Pervious Area [sf])
= (0.9 x 23,296sf) + (0.1 x 3,834sf)
= **21,350sf**

Design Volume = (85th Percentile Storm [in]) x (Catchment Area [sf] / 12)
= (1.1in) x (21,350sf / 12)
= **1,957cf**

Design Infiltration Rate = (Infiltration Rate) / (Factor of Safety)
= (33.1in/hr) / (3)
= **11.03in/hr**

Proposed Permanent BMP:
Maxwell Plus System consisting of one (1) 6' Diameter Drywell and one (1) Pre-Treatment Unit.

Drywell Infiltration Depth: 23' (infiltrating from 25' - 48' below grade)
Volume Infiltrated Within 3 hours: 1,274cf
Volume Stored Within Drywell: 990cf
Total Volume Treated by Drywell: 2,264cf

Total Volume Treated 2,264cf > Design Volume 1,957cf

The above drawings, specifications, ideas, designs and arrangements represented thereby are and shall remain property of the Architect (YM Architects), and no part thereof shall be copied, disclosed to others or used in connection with any other project other than the specific project for which they have been prepared and developed, without the written consent of the Architect (YM Architects). Visual contact with these drawings or specifications shall constitute conclusive evidence of acceptance of these restrictions. Written dimensions on these drawings shall have pre-over scaled dimensions. Contractors shall verify and be responsible for all dimensions and conditions on the job, and this office must be notified of any variations from the dimensions and conditions shown by these drawings. Shop details must be submitted to this office for approval before proceeding with fabrication. 2022©

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THE VILLAGE AT FAIRVIEW
Project. 2321 - 2335 N.FAIRVIEW ST., BURBANK CA 91504

HOMES & HOPE - BURBANK HOUSING CORPORATION
Developer.

10.08.24 Date
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Attachment 1:
Existing Condition 25-Year Hydrocalc Calculations

Peak Flow Hydrologic Analysis

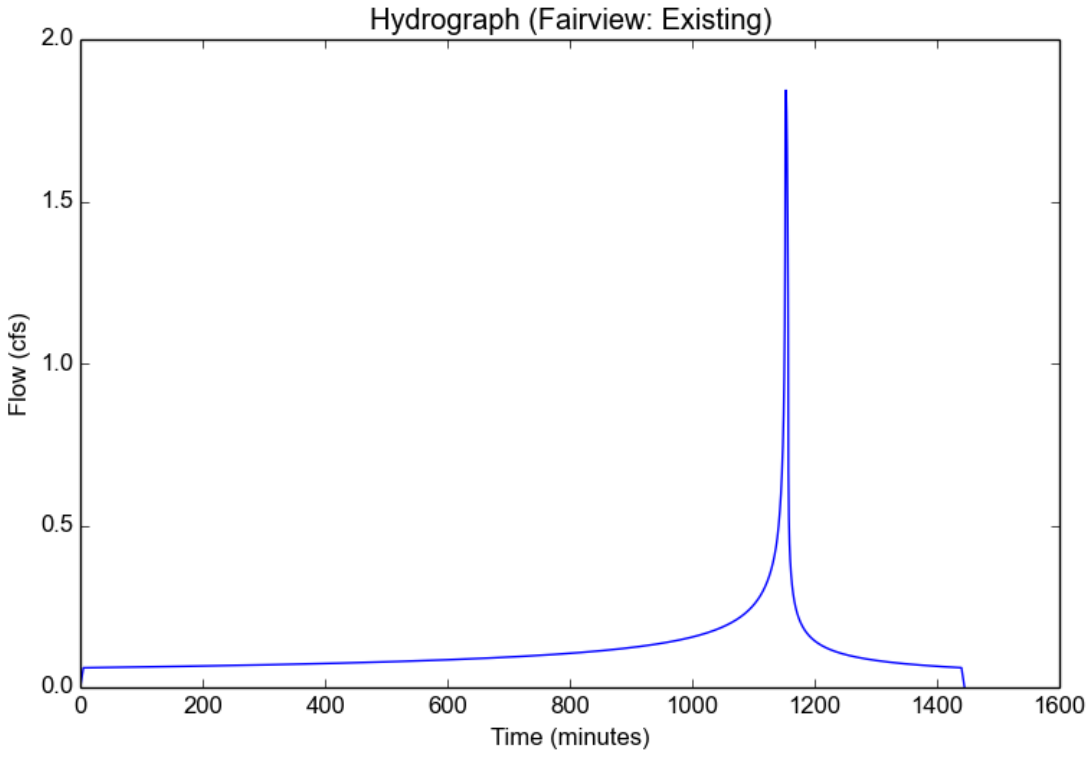
File location: P:/2023/2300102 2321 Fairview Affordable Housing/2 ENGR/STORM/Hydrology Study/Attachments/Attachment 1/Fairview - Existing 25yr.p
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Fairview
Subarea ID	Existing
Area (ac)	0.62
Flow Path Length (ft)	240.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.76
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.2338
Peak Intensity (in/hr)	3.7193
Undeveloped Runoff Coefficient (Cu)	0.4794
Developed Runoff Coefficient (Cd)	0.7991
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.8426
Burned Peak Flow Rate (cfs)	1.8426
24-Hr Clear Runoff Volume (ac-ft)	0.2278
24-Hr Clear Runoff Volume (cu-ft)	9924.8875



Attachment 2:
Proposed Condition 25-Year Hydrocalc Calculations

Peak Flow Hydrologic Analysis

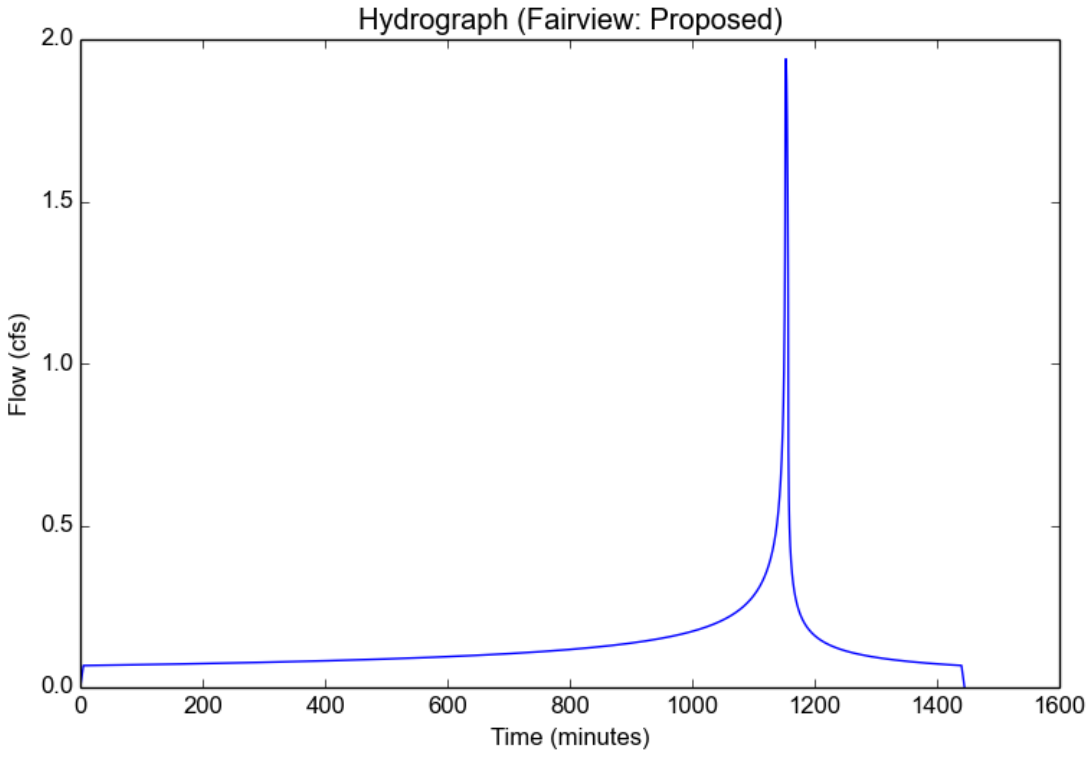
File location: P:/2023/2300102 2321 Fairview Affordable Housing/2 ENGR/STORM/Hydrology Study/Attachments/Attachment 2/Fairview - Proposed 25yr
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Fairview
Subarea ID	Proposed
Area (ac)	0.62
Flow Path Length (ft)	240.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	7.1
Percent Impervious	0.86
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	6.2338
Peak Intensity (in/hr)	3.7193
Undeveloped Runoff Coefficient (Cu)	0.4794
Developed Runoff Coefficient (Cd)	0.8411
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.9396
Burned Peak Flow Rate (cfs)	1.9396
24-Hr Clear Runoff Volume (ac-ft)	0.2527
24-Hr Clear Runoff Volume (cu-ft)	11007.2099



Attachment 3:
Existing Condition 85th Percentile Hydrocalc Calculations

Peak Flow Hydrologic Analysis

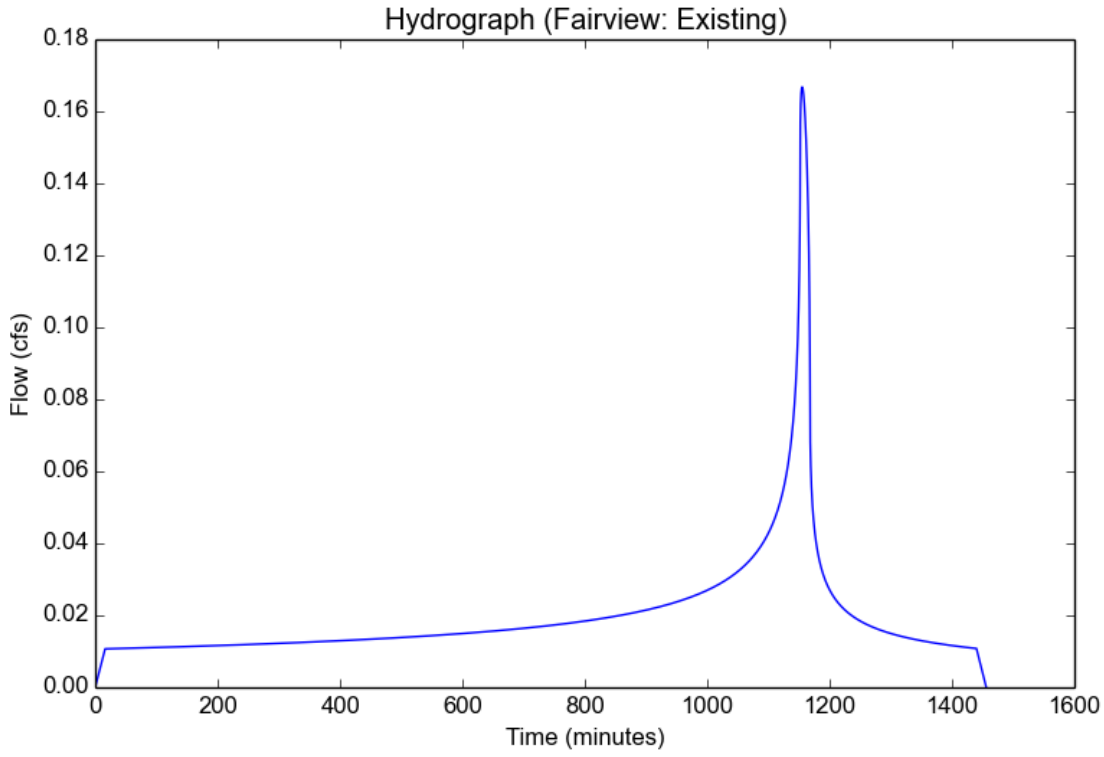
File location: P:/2023/2300102 2321 Fairview Affordable Housing/2 ENGR/STORM/Hydrology Study/Attachments/Attachment 3/Fairview - Existing 85th.p
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Fairview
Subarea ID	Existing
Area (ac)	0.62
Flow Path Length (ft)	240.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.76
Soil Type	15
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)	0.3799
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.708
Time of Concentration (min)	16.0
Clear Peak Flow Rate (cfs)	0.1668
Burned Peak Flow Rate (cfs)	0.1668
24-Hr Clear Runoff Volume (ac-ft)	0.0399
24-Hr Clear Runoff Volume (cu-ft)	1738.2872



Attachment 4:
Proposed Condition 85th Percentile Hydrocalc Calculations

Peak Flow Hydrologic Analysis

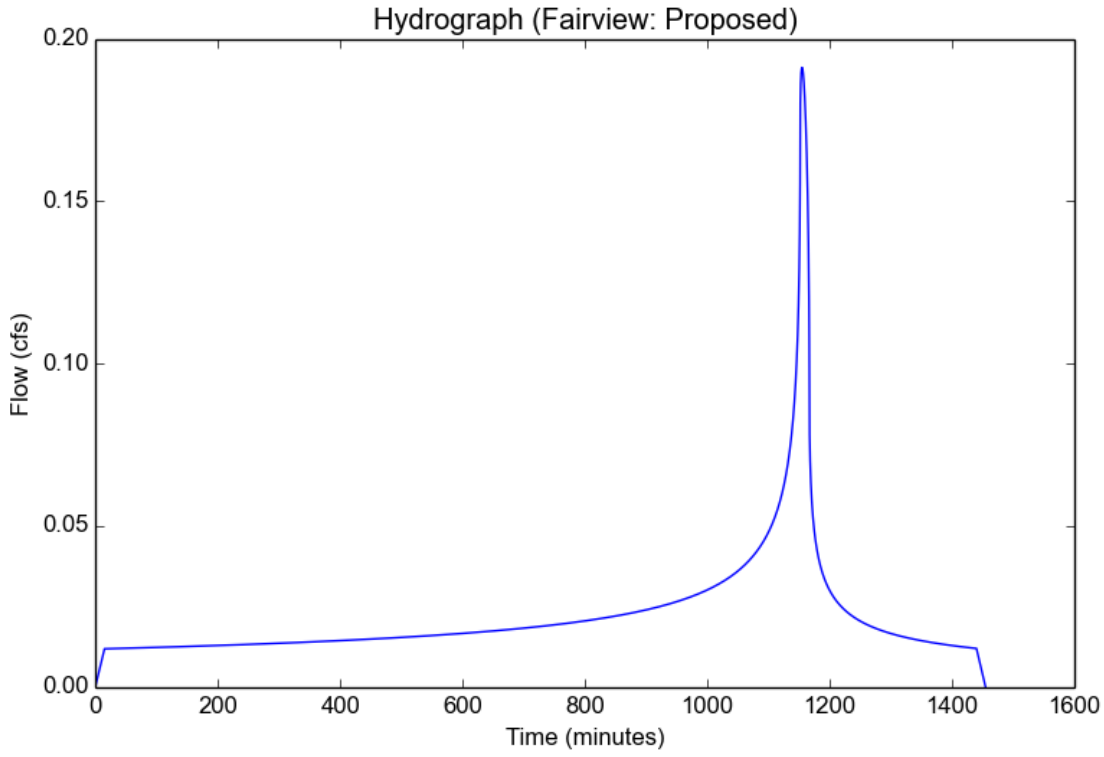
File location: P:/2023/2300102 2321 Fairview Affordable Housing/2 ENGR/STORM/Hydrology Study/Attachments/Attachment 4/Fairview - Proposed 85th
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Fairview
Subarea ID	Proposed
Area (ac)	0.62
Flow Path Length (ft)	240.0
Flow Path Slope (vft/hft)	0.01
85th Percentile Rainfall Depth (in)	1.1
Percent Impervious	0.86
Soil Type	15
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)	0.3916
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.788
Time of Concentration (min)	15.0
Clear Peak Flow Rate (cfs)	0.1913
Burned Peak Flow Rate (cfs)	0.1913
24-Hr Clear Runoff Volume (ac-ft)	0.0444
24-Hr Clear Runoff Volume (cu-ft)	1934.7031



Attachment 5:
Geotechnical Report

Geotechnologies, Inc.
Consulting Geotechnical Engineers
439 Western Avenue
Glendale, California 91201-2837
818.240.9600 • Fax 818.240.9675

May 13, 2024
File Number 22517

Burbank Housing Corporation
1819 Grismer Avenue
Burbank, California 91504

Attention: Sylvia Moreno

Subject: Geotechnical Engineering Investigation
Proposed Affordable Residential Development
2321 through 2335 North Fairview Street, Burbank, California

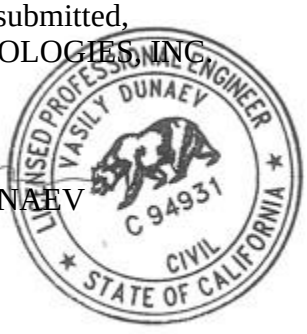
Dear Ms. Moreno:

This letter transmits the Geotechnical Engineering Investigation for the subject site prepared by Geotechnologies, Inc. This report provides geotechnical recommendations for the development of the site, including earthwork, seismic design, retaining walls, excavations, shoring and foundation design. Engineering for the proposed project should not begin until approval of the geotechnical investigation is granted by the local building official. Significant changes in the geotechnical recommendations may result due to the building department review process.

The validity of the recommendations presented herein is dependent upon review of the geotechnical aspects of the project during construction by this firm. The subsurface conditions described herein have been projected from limited subsurface exploration and laboratory testing. The exploration and testing presented in this report should in no way be construed to reflect any variations which may occur between the exploration locations, or which may result from changes in subsurface conditions.

Should you have any questions please contact this office.

Respectfully submitted,
GEOTECHNOLOGIES, INC.



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Review of the County of Los Angeles Flood and Inundation Hazards Map (Leighton, 1990), indicates the site lies within the inundation boundaries of the Hansen Dam. It should be noted, however, that Hansen Dam is primarily a flood control basin, and is rarely full. A determination of whether a higher site elevation would remove the site from the potential inundation zones is beyond the scope of this investigation.

Landsliding

The probability of seismically-induced landslides occurring on the site is considered to be remote due to the general lack of elevation difference slope geometry across or adjacent to the site.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the exploration, laboratory testing, and research, it is the finding of Geotechnologies, Inc. that construction of the proposed development is considered feasible from a geotechnical engineering standpoint provided the advice and recommendations presented herein are followed and implemented during construction.

Approximately 3 feet of fill materials were encountered during exploration. The existing fill materials are considered unsuitable for support of the foundations, floor slabs, or additional fill. However, it is anticipated that the fill materials will be removed during excavation of the proposed subterranean parking level. The proposed structure may be supported by conventional foundations bearing in the native alluvial soils expected at the subterranean subgrade.

Groundwater was not encountered in the exploratory excavations to a maximum depth of 60 feet below existing site grade. Based on review of Seismic Hazard Evaluation Report 016 (CDMG, 1998, revised 2006), the historically highest groundwater level for the site corresponds to a depth of 58 feet below the existing grade. It is anticipated that the finished floor elevation of the subterranean level will extend to a depth of 12 feet below the existing grade. Therefore, the finished

SITE DRAINAGE

Proper surface drainage is critical to the future performance of the project. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Proper site drainage should be maintained at all times.

All site drainage, with the exception of any required to be disposed of onsite by stormwater regulations, should be collected and transferred to the street in non-erosive drainage devices. The proposed structure should be provided with roof drainage. Discharge from downspouts, roof drains and scuppers should not be permitted on unprotected soils within five feet of the building perimeter. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. Drainage should not be allowed to flow uncontrolled over any descending slope. Planters which are located within a distance equal to the depth of a retaining wall should be sealed to prevent moisture adversely affecting the wall. Planters which are located within five feet of a foundation should be sealed to prevent moisture affecting the earth materials supporting the foundation.

STORMWATER DISPOSAL

Regulatory agencies have been requiring the disposal of a certain amount of stormwater generated on a site by infiltration into the site soils. Increasing the moisture content of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. This means that any overlying structure, including buildings, pavements, and concrete flatwork, could sustain damage due to saturation of the subgrade soils. Structures serviced by subterranean levels could be adversely impacted by stormwater disposal by increasing the design fluid pressures on retaining walls and causing leaks in the walls. Proper site drainage is critical to the performance of any structure in the built environment.

Percolation Testing

Percolation testing was conducted in Boring 1, which was drilled to a depth of 60 feet below the existing grade. At the completion of drilling, a 2-inch diameter casing was placed within the center of the borehole for the purpose of conducting percolation testing. The casing consisted of a slotted PVC pipe within the lower 30 feet of the borehole, and solid PVC pipe to the top of the borehole. A sand pack consisting of #3 Monterey Sand was poured into the annular space around the slotted portion of the casing. A 1-foot thick, hydrated bentonite seal was placed over the sand and drill cuttings were placed to the ground surface.

After the casing was installed, the borehole was filled with water for the purpose of pre-soaking for a minimum of 2 hours. After presoaking, the borehole was refilled with water, and the rate of drop in the water level was measured. The percolation test readings were recorded a minimum of 8 times or until a stabilized rate of drop was obtained, whichever occurred first. The percolation testing was performed within the native alluvial soils encountered between depths of 30 and 60 feet.

Based on results of the percolation testing and following the LA County method described in Guidelines for Low Impact Development Stormwater Infiltration (GS200.1 dated June 20, 2021), a percolation rate of 33.1 inches per hour was obtained. This percolation rete may be utilized for design of the proposed deep infiltration system (drywell).

The Proposed System

A specific stormwater infiltration system has not been discussed for the project. Preliminarily, it is anticipated that a suitable infiltration system may consist of a drywell system. The final location and design of the proposed infiltration system shall be reviewed and approved by this office prior to construction to evaluate whether the intent of the recommendations provided by this firm are satisfied.

Recommendations

Based on the results of the exploration, testing and research, it is the finding of this firm that on-site stormwater infiltration is feasible for the site. A suitable stormwater infiltration system may consist of a drywell system. The potential stormwater infiltration system is not expected to impact the proposed development, or existing neighboring development, provided the advice and recommendations presented herein are implemented during design and construction.

Because the proposed structure will occupy the majority of the site, it is anticipated that any potential infiltration drywells would be installed within the footprint of the proposed structure, below the subterranean level. But where sufficient space is available, the drywell may also be installed outside the proposed structure. It is recommended that the edge of any potential drywell system should maintain a minimum horizontal setback of 15 feet away from private property lines.

Stormwater infiltration shall only occur in the soils located below the primary zone of foundation influence. Based on anticipated size, depth, and loading distribution of the proposed column foundations, it is the opinion of this firm that the primary zone of foundation influence for the proposed structure would extend to a depth of 15 feet below the bottom of the proposed foundations. Therefore, it is recommended that stormwater infiltration should only occur in the native alluvial soils located at, or deeper, than 15 feet below the bottom of the deepest foundation adjacent to the potential drywell.

Soils located within the primary zone of foundation influence should not become wet or saturated as a result of a drywell. It is anticipated that a settling chamber will be installed within this primary zone of foundation influence; therefore, the seams and bottom of the settling chamber should be adequately sealed to prevent infiltration at this zone.

State regulations require that the bottom of infiltration units maintain a minimum vertical distance of 10 feet above the groundwater level. Groundwater was not encountered at the site during exploration, conducted to a depth of 60 feet below grade. Therefore, it is recommended that the drywell system does not extend deeper than 50 feet below the existing grade.

Any potential drywells should be installed centered in between surrounding foundations. Depending on their final location, it is anticipated that the settling chamber of the drywell may be surcharged by proposed adjacent foundations, in which case the chamber should be designed to withstand this additional surcharge load. The final location of the proposed drywells shall be reviewed and approved by this office prior to construction.

The Project Site is not located in an area considered susceptible to liquefaction. The proposed stormwater infiltration system will not be located in hillside area, and no slopes are nearby. The onsite soils are in the very low expansion range and are not susceptible to significant hydroconsolidation.

It is recommended that the design team, including the structural engineer, waterproofing consultant, plumbing engineer, environmental engineer and landscape architect be consulted in regard to the design and construction of infiltration systems. The design and construction of stormwater infiltration systems is not the responsibility of the geotechnical engineer. However, based on the experience of this firm, it is recommended that several aspects of the use of such facilities should be considered by the design and construction team:

- All infiltration devices should be provided with overflow protection. Once the device is full of water, additional water flowing to the device should be diverted to another acceptable disposal area or disposed offsite in an acceptable manner.

- All connections associated with stormwater infiltration devices should be sealed and water-tight. Water leaking into the subgrade soils can lead to loss of strength, piping, erosion, settlement and/or expansion of the effected earth materials.

Date: 22-Mar-24
File No. 22517
File Name : Burbank Housing Corporation

Percolation Rate Calculation for Small Diameter Boring

Testing Well Number 1
Boring Diameter (DIA) 8 inches
Depth of Boring 60 feet
Pre-soak Time 2 hours
Measured By H.C.

Reading Number	Clock Time	Elapsed Time	Water Measurement (d_i) and (d_f)	Water Level Drop	Rate of Drop Variation		Flow Rate	Wet Surface Area	Pre-Adjusted Infiltration Rate
		Min	feet	in	%		in^3/hr	in^2	in/hr
1	1:03		30.00						
	1:18	15	59.30	351.60			70693.5	261.4	270.5
2	1:25		30.00						
	1:40	15	59.20	350.40	-0.34		70452.3	291.5	241.7
3	1:49		30.00						
	2:04	15	59.10	349.20	-0.34		70211.0	321.7	218.3
4	2:08		30.00						
	2:23	15	59.00	348.00	-0.34		69969.7	351.9	198.9
5	2:32		30.00						
	2:47	15	59.00	348.00	0.00		69969.7	351.9	198.9

Note: Calculation based on County of Los Angeles, Administrative Manual, Low Impact Development Best Management PracticeGuideline for Design, Investigation, and Reporting, dated 6/30/21.
LA County Minimum 0.3 Inches per hour

Raw Percolation Rate= 198.9 in/hr
RF_t= 2
RF_v= 2
RF_s= 2

Design Infiltration Rate = 33.1 in/hr