



**Update to the
Technical Drainage Study
for**

SAGE COLLEGIATE PHASE II

Date Prepared:
February 2024

Prepared for:
Red Hook Sage LLC C/O Red Hook Capital Partners IV LLC
2120 E Grand Ave STE 135
El Segundo, CA 90245

Prepared by:
Kimley-Horn and Associates, Inc.
6671 Las Vegas Boulevard South, Suite 320
Las Vegas, NV 89119
702.862.3600

Kimley»Horn

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Sage Collegiate Phase II Date: February 2024

Location of Development: a) Descriptive (Cross Streets) North/South: W Charleston Blvd/Fulton Pl
East/West: Hinson St/Bedford Rd

b) Section: 31 Township: 20 Range: 61

c) APN : 139-31-801-007 and 139-31-801-017

Name of Owner: Red Hook Sage LLC C/O Red Hook Capital Partners IV LLC

Telephone No.: N/A Fax No.: N/A E-Mail Address: _____

Address: 2120 E Grand Ave STE 135, El Segundo, CA 90245

Contact Person-Name: David Harvey, P.E. Telephone No.: 702.637.9664

* E-Mail Address: david.harvey@kimley-horn.com Fax No.: N/A

Firm: KIMLEY-HORN

Address: 6671 Las Vegas Boulevard South, Suite 320 Las Vegas, NV 89119

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☒	Planned Unit Development	☒	Other (Please specify below)
☐	Large Parcel Map	☐	Building Permit	GRADING PERMIT	

1. Total Owned Land Area: At Site: +/- 0.95 acres Being Developed/Disturbed: +/- 0.95 acres

2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☐ Yes** ☒ No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ Yes** ☐ No

4. Proposed type of development (Residential, Commercial, Etc.): Commercial

5. Approximate upstream land area which drains to the subject site: +/- 0.53 acres

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: 1. Fire Station Study

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: 1. Surface drain to Hinson Street

8. Briefly describe your proposed schedule for the subject project: ASAP

Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

***New Required Field**

****Review and concurrence of the Clark County Regional Flood Control District is required.**

	Revision	Date

Engineer's Seal

Local Entity File No.

REFERENCE:

STANDARD FORM 1



February 1, 2024

Mr. Albert Sung, P.E.
City of Las Vegas Flood Control
333 Rancho Drive
Las Vegas, NV 89106

RE: *Update to the Technical Drainage Study for Sage Collegiate Phase II (DS5720B)*

Dear Mr. Sung,

This letter certifies that all items provided on the Update to the Technical Drainage Study for Sage Collegiate Phase II electronic submittal matches the paper version bound into the study.

With Kimley-Horn, you should expect more and will experience better. Please contact me at (702) 637-9664 or david.harvey@kimley-horn.com should you have any questions or concerns.

Sincerely,

David Harvey, P.E.

CITY OF LAS VEGAS			DATE:
INTER-OFFICE MEMORANDUM			November 28, 2023
TO: Land Development Services Department of Community Development – Building & Safety Division			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for:			COPIES TO:
Sage Collegiate Phase II			Kimley-Horn and Associates, Inc.
Cross Streets:	W. Charleston Blvd. and Hinson St.		Red Hook Sage LLC
File Number:	F:\Depot\DSMemos\DS5702B.doc		Bart Anderson, P.E., DevCo
Parcel Number:	139-31-801-007; 139-31-801-017		CCRFCFCD
Zoning Action:	23-0255-ZON; 123-0255-SDR1		
FEMA Flood Zone	YES	NO X	
Proposed Storm Drain	YES	NO X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	9/11/2023	9/28/2023	See Comments Below	\$400.00	5433550: \$400
2 ND Submittal	10/17/2023	11/1/2023	Conditionally Approved	\$400.00	5489132: \$400
CCRFCFCD	11/27/2023	11/28/2023	Concurrence Received	N/C	N/C
			TOTAL FEES (LDDRS):	\$800.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

***** The City of Las Vegas Flood Control is standardizing the file naming of drainage studies and plans during the digitizing process. When saving the project files in the CD or thumb drive, please follow the system below:**

If drainage study only contains one combined file, use the following naming convention in Document Title:

1st Submittal DS and Plans (for first and original submittal);

2nd Submittal DS and Plans (for second submittal (addendum #1)) etc.

If drainage study contains multiple files, use the following naming convention in Document Title:

1st Submittal DS (for the report of the drainage study)

1st Submittal Plan 1 (could be the drainage condition maps)

1st Submittal Plan 2 (could be the improvement plans) etc.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is

maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, final approval of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

END OF REMARKS
JRT

T/R/S: T20S/R61E/S31
AREA M31

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February 1, 2024

Albert Sung, P.E.
Flood Control Project Engineer
Department of Public Works

RE: *Update to the Technical Drainage Study for Sage Collegiate Phase II (DS5702B)*

Dear Mr., Sung,

The purpose of this letter is to serve as the **Update** to the subject project. The *Technical Drainage Study for Sage Collegiate Phase II* (hereinafter referred to as **TDS**) was approved by City of Las Vegas (CLV) on November 28, 2023. The **Update** included herein, is intended to supersede data contained in previous studies.

Since approval of the **TDS**, several top of curb (TC) elevations have been updated to meet ADA compliance along the driveway north and east of the proposed building. Additionally, a trash enclosure has been added near the proposed LID swale.

The proposed project maintains existing drainage patterns and the proposed buildings meet finished floor elevation criteria. The methodologies and calculations presented in this report are in compliance with the CCRFCD Hydrologic Criteria and Drainage Design Manual (Manual).

The proposed updates do not require any revisions to the hydrology as the revised grading does not change the drainage patterns from the approved **TDS**. The modified curb elevations require revisions to hydraulic sections **DON1-A1**, **DON1-A2**, and **CH-1**. These modifications resulted in a slight decrease in flow depth and flow velocity for sections **DON1-A1** and **DON1-A2**. As a result, the building finished floor is still adequately protected. Meanwhile, for section **CH-1**, the flow depth increases slightly, however the flow is still contained in the curb and the trash enclosure will be solid grouted (2 courses) in order to be adequately floodproofed. Please refer to the grading plans in **Appendix D** and hydraulic sections in **Appendix B**. The hydraulic section summary table has been updated on **Figure PRO** in **Appendix A**. Pertinent reference material from the TDS has been included in **Appendix C**.

In general, the overall drainage patterns for the site are consistent with the original **TDS**, and the proposed site plan does not alter existing peak flows or the character of flows downstream of the development and do not pose any negative impacts on the downstream facilities and development.

With Kimley-Horn, you should expect more and will experience better. Please contact me at (702) 637-9664 or david.harvey@kimley-horn.com should you have any questions.

Sincerely,

David Harvey, P.E.



LIST OF APPENDICES

Appendix A – Documents & Figures

- PRO Proposed Condition Basin Map

Appendix B – Hydraulic Calculations

- Normal Depth Calculations – Onsite
- Normal Depth Calculations – Swale

Appendix C – Reference

- Technical Drainage for Sage Collegiate Phase II (Sage Collegiate Study, November 2023, DS5702B)

Appendix D – Improvement Plans

Appendix E – Data CD