



Update to the Technical Drainage Study

for

SYMPHONY PARK BLOCKS C&D

Date Prepared:
November 2021

Prepared for:
Symphony Park Vegas LLC
4514 Cole Ave, Suite 810
Dallas, TX 75205
214.497.5932

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: Symphony Park Blocks C & D Date: November 2021

Location of Development: a) Descriptive (Cross Streets) North/South: S Grand Central Parkway

East/West: Symphony Park Avenue

b) Section: 33 & 34 Township: 20 Range: 61

c) APN : 139-33-511-008, 139-34-110-008

Name of Owner: Symphony Park Vegas LLC

Telephone No.: 214.420.3055 Fax No.: _____ E-Mail Address: karla.cavazos@southernland.com

Address: 4514 Cole Avenue, Suite 810, Dallas, TX 75205

Contact Person-Name: Michael Schwab, P.E. Telephone No.: 702.790.0206

* E-Mail Address: michael.schwab@kimley-horn.com Fax No.: _____

Firm: KIMLEY-HORN

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

Type of Land Development/Land Disturbance Process:

<input type="checkbox"/> Rezoning	<input type="checkbox"/> Subdivision Map	<input type="checkbox"/> Clearing and Grading Only
<input type="checkbox"/> Parcel Map	<input type="checkbox"/> Planned Unit Development	<input checked="" type="checkbox"/> Other (Please specify below)
<input type="checkbox"/> Large Parcel Map	<input checked="" type="checkbox"/> Building Permit	GRADING PERMIT

1. Total Owned Land Area: At Site: +/- 5.1 acres Being Developed/Disturbed: +/- 5 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.): Residential/Commercial

5. Approximate upstream land area which drains to the subject site: N/A

6. Has the site drainage been evaluated in the past? YES NO If yes, please identify documentation: TDS for Union Park

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: CCRFCFD Facility WAGC 0014

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



November 10, 2021

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 Symphony Park Blocks C & D*

Dear Mr. Sung,

This letter certifies that all items provided on the Update to the Technical Drainage Study for Symphony Park Blocks C & D 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) 790-0206 or michael.schwab@kimley-horn.com should you have any questions or concerns.

Sincerely,

Michael E. Schwab, P.E.

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: July 7, 2021
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
Symphony Park Blocks C & D		Kimley-Horn Associates
Cross Streets:	NEC Grand Central Pkwy & Symphony Park Av	Symphony Park Vegas, LLC
File Number:	F:\Depot\DSMemos\DS5454B.doc	Bart Anderson, P.E., DevCo
Parcel Number:	139-33-511-008 & 139-34-110-008	CCRFCFCD
Zoning Action:	21-0018-GPA1; 21-0020-VAC1; 21-0014-SDR1; 21-0014-SUP1 & 21-0014-SUP2	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	5/13/2021	5/27/2021	Not Approved	\$400.00	4290985: \$400
2 nd Submittal	6/22/2021	7/7/2021	See Comments Below	\$400.00	4342321: \$400
TOTAL FEES (LDDRS):				\$800.00	----

REMARKS:

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

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

1. Contact the *City Engineer Office* to coordinate the development of this project with the *Symphony Park* project and any other public improvement projects to this site. The L-curb of *Promenade Place* and *Carson Avenue* must either be already in place or to be constructed concurrently with the subject project improvements. Comply with the recommendations of the *City Engineer Office*.
2. **This drainage study is acceptable in concept;** however, *City of Las Vegas* will not formally accept the study until the *Clark County Regional Flood Control District (CCRFCFCD)* has issued a letter of concurrence. The engineer should contact the CCRFCFCD to confirm that they have begun their review.

Please note that effective March 15, 2019, the CCRFCFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

3. **City of Las Vegas** does not allow HDPE pipe in public right-of-ways or public drainage easements. Note that *City of Las Vegas* only allows the use of HDPE storm drain pipes for privately owned and privately maintained storm drain systems which serve and are located exclusively on private properties. Any proposed HDPE storm drain pipes must also meet all design criteria established by the *Clark County Regional Flood Control District* and must be installed per *Clark County Regional Transportation Commission Uniform Standard Drawings and Specifications*.

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.

END OF REMARKS
HDR/AYS

T/R/S: T20S/R61E/33
AREA M-33

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November 10, 2020

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 Symphony Park Blocks C & D (DS-5454B)

Dear Mr. Sung,

The purpose of this letter is to serve as the **Update** to the subject project. The *Technical Drainage Study for Symphony Park Blocks C & D* (hereinafter referred to as **TDS**) was approved by CLV on July 7, 2021. Pertinent grading plans have been included in **Appendix C**. The **Update** included herein, is intended to supersede data contained in previous studies.

Since approval of **TDS**, some site revisions have been made in the area of **Block D**, which consists of a proposed parking garage and low-rise buildings, as shown on the grading plans found in **Appendix D**. The proposed revisions include:

- Roof drain flows represented by prorate basins **DON-7**, **DON-11**, and **DON-13** have been revised to connect to the storm drain systems in the courtyards. **Figure ULT-1** has been updated to show the correct direction of flows and can be found in **Appendix A**. The WSPG model Symphony_Main_CD_1 has been updated with the revised flow rates (**Appendix B**), and Figure WSPG has been updated and can be found in **Appendix A**.
- Storm drain removed along the southeast and northwest boundaries of the parcel.
- Additional FFEs along the northwest parcel. The FFE of the Riser Room is lower than the flowline of the street; however, the elevation at the top of the stairs is 1-foot above the flowline in Grand Central Parkway, and the twice the depth of the flow is 0.62 feet. Additionally, an area drain with a grate elevation lower than finished floor has been provided to ensure no flow enters the Riser Room.

The proposed project generally 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 revisions did not require any revisions to the hydrology as the revised grading does not change the drainage patterns from the approved **TDS**. Furthermore, none of the hydraulic sections used to check the finished floor elevations of **Block D** in the approved **TDS** have changed with the proposed revisions. The pertinent grading plans from the approved **TDS** have been included in **Appendix C**.

The Clark County Regional Flood Control District requirement for the finish floor elevation (FF) is that it must be 18 inches above the centerline grade of the adjacent street or be elevated to twice the depth of flow up to 18 inches above the water surface elevation (WSE). Additional criteria requires the

finished floor elevation to be 6 inches above adjacent on-site flowline high point. The finished floor of the proposed building is elevated more than 18 inches above centerline grade of the adjacent streets. Please refer to **Appendix D** for the grading plans.

In general, the overall drainage patterns for the site are consistent with the original **TDS** and the proposed site plan does not significantly 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) 790-0206 or michael.schwab@kimley-horn.com should you have any questions.

Sincerely,

Michael Schwab, P.E.

LIST OF APPENDICES

Appendix A – Documents & Figures

- ULT Ultimate Condition Basin Map
- WSPG WSPG Exhibit

Appendix B – Hydraulic Calculations

- Storm Drain Full Flow Capacity Calculation
- WSPG Models
 - Symphony CD Mainline 1

Appendix C – Reference Improvement Plans

Appendix D – Improvement Plans

Appendix E – Data CD