



**Update #2 to the Technical
Drainage Study**

for

SYMPHONY PARK BLOCKS C&D

Date Prepared:
December 2023

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: December 2023

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



December 14, 2023

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

RE: *Update #2 to the Technical Drainage Study for Symphony Park Blocks C & D*

Dear Mr. Sung,

This letter certifies that all items provided on the Update #2 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.

David Harvey, P.E.

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December 14, 2023

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

RE: Update #2 to the Technical Drainage Study for Symphony Park Blocks C & D (DS-5454D)

Dear Mr. Sung,

The purpose of this letter is to serve as **Update #2** to the subject project. The *Update to the Technical Drainage Study for Symphony Park Blocks C & D* (hereinafter referred to as **UP**) was approved by CLV on November 23, 2021, and 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 **UP**, some site revisions have been made to the onsite storm drain network, as shown on the grading plans found in **Appendix D**. The proposed revisions include:

- The north storm drain line (Symphony_Main_CD_1) was shifted south by 1.5' to accommodate the installation of a water line. The WSPG model Symphony_Main_CD_1 has been updated with the revised slope (**Appendix B**), and **Figure WSPG** has been updated and can be found in **Appendix A**
- The slope between SDMH #1 and SDMH #2 was updated to be 1.26%. The previously approved slope was 1.25%.
- The length of pipe between the inserta-tee and SDMH#2 is now 67 LF, while the approved length was 68 LF. Please refer to **Detail A** on **Sheet C3.01** of the **Improvement Plans**, located in **Appendix D**.
- The inverts at the inserta-tee junction just downstream of SDMH #1 have been updated to be 2029.33 for the 18" pipe and 2029.74 for the 8" pipe connection. The approved inverts were at 2029.33 and 2029.75, respectively. The new invert for the 8" connection results in a pipe slope of 6.98% for the 8" pipe, compared to 6.96% in the previously approved design. Please refer to **Detail A** on **Sheet C3.01** of the **Improvement Plans**, located in **Appendix D**.
- The WSPG model Symphony_Main_CD_1 has been updated with the revised slope (**Appendix B**), and **Figure WSPG** has been updated and can be found in **Appendix A**.
- The east storm drain line was updated to be 18-inch RCP instead of the 16-inch HDPE from the previous design. This update resulted in a pipe slope of 3.11% versus the previously approved slope of 2.97%. Additionally, the Invert In at SDMH #4 was updated to be 2027.34 to match the invert out of the 18-inch pipe. This is compared to the previous invert of 2027.42. The WSPG model for these revisions is located in **Appendix B**. Please note that the starting water surface elevation for the outlet of this model was referenced from the *Technical Drainage Study Update No. 3 for Union Park*, which can be found in **Appendix C**.

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 revisions did not require any revisions to the hydrology as the revised storm drain changes do not change the drainage patterns from the approved **TDS or UP**. The pertinent grading plans from the approved **UP** have been included in **Appendix C**.

In general, the overall drainage patterns for the site are consistent with the original **TDS** and **UP** 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

- WSPG WSPG Exhibit

Appendix B – Hydraulic Calculations

- WSPG Models
 - Symphony CD Mainline 1
 - Symphony CD Mainline 2

Appendix C – References

- Technical Drainage Study Update #3 for Union Park, Prepared by Kimley-Horn & Associates, Inc., October 2008
- Update to the Technical Drainage Study for Symphony Park Blocks C&D, Prepared by Kimley-Horn & Associates, Inc, November 2021

Appendix D – Improvement Plans

Appendix E – DataCD